

AN ANNOTATED BIBLIOGRAPHY

OF

MEDICAL MYCOLOGY

1947

The contracted titles used in this bibliography are based on the *World List of Scientific Periodicals*, with the following exceptions:

- B.A. = *Biological Abstracts*
 B.H. = *Bulletin of Hygiene*
 R.A.M. = *Review of Applied Mycology*
 T.D.B. = *Tropical Diseases Bulletin*
 V.B. = *Veterinary Bulletin*.

845. REDAELLI (P.) & CIFERRI (R.). **Un quadriennio di attività del centro di micologia umana e comparata di Pavia (1938-1941).** [Four years' activities of the Centre for Human and Comparative Mycology of Pavia (1938-1941).]—*Mycopathologia*, iv, 1, pp. 25-47, 1947. [German, Spanish, and English summaries.]

In this report a list is given, with annotations, of the yeasts and other dermatophytes or members of Hyphales studied at the University of Pavia during the years 1938 to 1941. Descriptions are given of *Mycotorula messanensis* n. sp. and *Glenospora viridobrunnea* n. sp., isolated from cases of dermatomycosis and mycetoma, respectively. New combinations made include *Torulopsis sexta* (Will), *Mycotorula pseudotropicalis* (Castellani), *Mycotorula krausi* (Ota), and *M. chalmersi* (Castellani). Experimental inoculations of guinea-pigs with *Histoplasma capsulatum* gave negative results.

846. HAZEN (ELIZABETH L.) & MARTIN (ALICE J.). **A study of specimens for evidence of mycotic infection.**—*Rep. N. Y. St. Dep. Hlth*, pp. 72-74, 1946.

Approximately half the specimens examined at the New York Laboratory of the Division of Laboratory and Research, State Department of Health, for mycotic infection were from scalps of children with a history of tinea capitis. In 76 per cent. of the specimens, evidence of ringworm infection was found; *Microsporum audouini* and *M. canis* were isolated in 53 and 11 per cent. of the cases, respectively. *Trichophyton gypseum* was isolated from several skin scrapings. *Cryptococcus neoformans* was isolated from the sputum of a six-year-old child with a history of recurrent pneumonia since 1945. *Candida albicans* constituted approximately 62 per cent. of 53 yeast-like cultures from sputum, from the throat and mouth, and from vaginal or cervical exudate. Five strains of *Actinomyces* found in pus, sputum, and a culture submitted for identification are under study, case summaries being given. On p. 71 of this report Dr. E. R. Maillard states that a group of 64 stock cultures of fungi pathogenic to man is maintained at the New York Laboratory.

847. LITTMAN (M. L.). **A culture medium for the primary isolation of fungi.**—*Science*, cvi, 2744, pp. 109-111, 4 figs., 1947.

Because of the many shortcomings of Sabouraud's dextrose agar, especially when used for the primary isolation of fungi pathogenic to man from material containing a mixed flora, the following new culture medium has been prepared,

containing in distilled water, 1 per cent. dextrose, 1 per cent. peptone, 1.5 per cent. ox gall, 2 per cent. agar, 1 to 100,000 crystal violet, and 30 units of streptomycin. The medium, without the streptomycin, is distributed in 1 l. flasks, sterilized, and stored in a refrigerator. Before use the agar is re-melted and cooled to approximately 46° C. Streptomycin in sterile saline is then added and mixed thoroughly, and the agar poured into Petri dishes. Many specimens producing only a heavy bacterial overgrowth on Sabouraud's agar developed 30 to 100 well-isolated mold and yeast colonies on the new medium.

848. CATANEI (A.). **Du choix des animaux de laboratoire pour l'étude du pouvoir pathogène des champignons parasites de l'Homme.** [On the choice of laboratory animals for the study of the pathogenic properties of fungi parasitic on Man.]—*Arch. Inst. Pasteur Algér.*, xxv, 2, pp. 90–93, 1947.

Experimental studies on the pathogenicity of ringworms are best conducted on guinea-pigs, but white mice react more readily to inoculation with the agents of sporotrichosis, including *Sporotrichum* (*Rhinocladium*) *beurmanni* [*S. schencki*], actinomycosis (*Actinomyces israeli*) [*A. bovis*], mycetomata (*Acremonium potroni* and *Allescheria boydii*), and histoplasmosis (*Histoplasma capsulatum*).

849. FLEMING (R. S.) & QUEEN (F. B.). **Penicillin resistance. II. Of fungi.**—*Amer. J. clin. Path.*, xvi, 2, pp. 66–67, 1946.

Of 19 fungi belonging to 12 genera pathogenic to man tested for penicillin sensitivity, all except *Actinomyces bovis* were resistant to the drug in concentrations of 500 units and upwards per c.c.

850. WILSON (J. W.). **An improved method for preparing permanent slides of fungus cultures.**—*Arch. Derm. Syph.*, N.Y., lii, 4, p. 267, 1 diag., 1945.

The method here proposed for the preparation of permanent slides of fungus cultures is a modification of that described by Diehl in *Science*, lxix, p. 276, 1929.

851. KURUNG (J. M.). **The isolation and identification of pathogenic fungi from sputum. II.**—*Amer. Rev. Tuberc.*, lv, 5, pp. 387–411, 11 pl. (1 col.), 1947.

Directions are given for the collection of sputum and its preparation for microscopic study, the preparation of standard media for the cultivation of fungi, the use of slide cultures, and the identification, with the aid of plates and explanatory notes, of the following pathogens likely to be encountered in the samples: *Actinomyces bovis*, *Coccidioides immitis*, *Blastomyces* [*dermatitidis*], *Histoplasma capsulatum*, *Cryptococcus* [*neoformans*], *Sporotrichum* [*schencki*], *Geotrichum*, *Aspergillus* spp., mostly *A. fumigatus*, and *Candida albicans*. Two of the plates illustrate, respectively, structures resembling fungi found in sputum and the component parts of the fungus.

852. SMITH (D. T.). **Pulmonary mycoses.**—*Clinics*, iv, 4, pp. 994–1034, 1945.

This is a summary of the available information, supplemented by bibliographical references, on the incidence, diagnosis, and therapy of pulmonary actinomycosis (caused as to 90 per cent. by *Actinomyces bovis* and as to 10 per cent. by the aerobic *A. sp.*), North American blastomycosis (*Blastomyces dermatitidis*), South American blastomycosis (*B. [Paracoccidioides] brasiliensis*), coccidioidomycosis (*Coccidioides immitis*), cryptococcosis or torulosis (*Cryptococcus neoformans*), moniliasis (*Candida albicans*), geotrichosis (*Geotrichum*), sporotrichosis (*Sporotrichum schencki*), histoplasmosis (*Histoplasma capsulatum*), aspergillosis (*Aspergillus* spp.), penicilliosis and

mucormycosis (*Penicillium* and *Mucor* spp.), and coniosporiosis, an allergic condition developing in labourers in northern forests exposed to the spores of *Coniosporium corticale* on the inner bark of maple [*Acer*] logs.

853. LUTERAAN (P. J.). **De l'action empêchante de diverses substances sur la croissance de champignons pathogènes pour l'Homme.** [On the inhibitory action of various substances on the growth of fungi pathogenic to Man.]—*C.R. Soc. Biol., Paris*, cxl, 21–22, pp. 832–834, 1946.

Sodium fluoride, Congo red, lactoflavin, and *para*-quinone were tested for a possible inhibitory action on pure cultures of six fungi pathogenic to man at a dosage of 1 mg. per 10 c.c. agar. The same organisms were also cultured on agar which had supported an abundant growth of *Bacillus subtilis* for two days. Sodium fluoride was without effect on any of the fungi; Congo red was weakly active against *Coccidioides immitis*, *Sabouraudites* [*Microsporum*] *audouini*, and *Trichophyton violaceum*; lactoflavin [Nos. 953, 954, below] exerted a similar action on *C. immitis*, *Histoplasma capsulatum*, and *M. audouini*, and a stronger one on *T. album* and *T. violaceum*; *para*-quinone was slightly antagonistic to *Phialophora verrucosa*, definitely so to *C. immitis*, *H. capsulatum*, and *M. audouini*, and caused very marked and persistent inhibition of the two *T. spp.*; while *B. subtilis* proved to be a powerful antagonist of all the fungi, *M. audouini* being slightly more resistant than the rest.

854. LANDY (M.), ROSENMAN (S. B.), & WARREN (G. H.). **An antibiotic from *Bacillus subtilis* active against pathogenic fungi.**—Abs. in *J. Bact.*, liv, 1, p. 24, 1947.

An antibiotic active against important pathogenic fungi and with relatively negligible anti-bacterial properties has been obtained from *Bacillus subtilis*. The active principle may be concentrated by precipitation from the culture broth at pH 2.5, the resultant precipitate extracted with ethanol, and the active agent precipitated by ether. The concentrate thus isolated shows unusual heat stability, is not inactivated at pH 2.5 to 9, or by body fluids. Complete inhibition of *Trichophyton mentagrophytes*, *Epidermophyton floccosum*, *Microsporum audouini*, *T. rubrum*, and *T. [Achorion] schoenleini* was obtained in a medium containing 0.025 mg. per ml. *Blastomyces dermatitidis* (yeast form) was completely inhibited by a concentration of 0.025 mg. per ml., while the mycelial form required a concentration of 0.01 mg. per ml. to suppress growth. *Nocardia* [*Actinomyces*] *asteroides*, *Phialophora verrucosa*, and *Hormodendrum* [*P.*] *pedrosoi* were relatively resistant. Complete growth suppression of *Candida albicans*, *Cryptococcus neoformans*, and *Sporotrichum schencki* was obtained with 0.05 mg. per ml. *Coccidioides immitis*, *Histoplasma capsulatum*, *Monosporium apiospermum* [*Allescheria boydii*], and *B. [Paracoccidioides] brasiliensis* required only 0.025 mg. per ml. for complete inhibition.

855. LITTMAN (M. L.). **Streptomycin tolerance of saprophytic and pathogenic fungi.**—*J. Bact.*, liv, 3, p. 399, 1947.

In tests of the effect of streptomycin sulphate (30 units per ml.) on various fungi, no effect was produced on *Blastomyces dermatitidis*, *B. [Paracoccidioides] brasiliensis*, *Coccidioides immitis*, and a number of other human pathogenic species.

856. DE SAINT-RAT (L.) & LUTERAAN (P.). **Action antibiotique, in vitro, du plumbagol, à l'égard de champignons pathogènes pour l'Homme.** [Antibiotic action of plumbagol *in vitro* towards pathogenic fungi of Man.]—*C.R. Acad. Sci., Paris*, ccxxiv, 22, pp. 1587–1589, 1947.

Plumbagol, the isomer of phthiocol, a normal constituent of *Mycobacterium tuberculosis*, was added at a concentration of 1 in 4,000 to cultures of five

human pathogens at the rate of 1 c.c. per 10 c.c. Langeron's peptone-glucose-agar medium (Précis de Mycologie, Paris, 1945). It completely inhibited the growth of *Coccidioides immitis*, *Histoplasma capsulatum*, *Ctenomyces radicans* [? *Trichophyton mentagrophytes*], and *T. ferrugineum*, and slightly retarded that of *Phialophora verrucosa*. Comparative tests with the antibiotics, phthiocol and 2-methyl 1-4-naphthoquinone, showed that the former moderately inhibited all the organisms except *P. verrucosa*, which was unaffected, while the latter exerted a similar inhibition on *Coccidioides immitis*, *H. capsulatum*, and *P. verrucosa*, but equalled plumbagol in its toxicity to (?) *T. mentagrophytes* and *T. ferrugineum*.

857. NOVAK (M.) & FLANDERS (THELMA). **In vitro responses of *Actinomyces bovis* to sulfonamides and antibiotics.**—Abs. in *J. Bact.*, liv, 1, pp. 79–80, 1947.

Evidence was obtained that for three human and two bovine strains of *Actinomyces bovis* sulphathiazole and sulphadiazine were not inhibitory in concentrations of 50 mg. per cent., penicillin was inhibitory in concentrations ranging from 0.1 to 0.5 units per ml., and streptomycin inhibited all except one strain in concentrations of 100 units per ml.

858. PELOURO (J. T.). **A anatomo e histopatologia da actinomycose.** [The anatomy and histopathology of actinomycosis.]—*Repos. Lab. Pat. vet., Lisboa*, vi, pp. 5–22, 1945. [English, French, and German summaries: *V.B.*, xvii, 529.]

This is a general review of the present state of knowledge on actinomycosis.

859. HABIBI (A.). **Recherches sur le pouvoir pathogène d'*Actinomyces* saprophytes isolés à Alger.** [Studies on the pathogenicity of saprophytic *Actinomyces* isolated at Algiers.]—*Arch. Inst. Pasteur Algér.*, xxv, 1, pp. 17–51, 1947.

This abridged version of a thesis submitted in 1946 falls into four parts dealing with (1) the material and technical conditions of the studies, (2) the results of the morphological investigation of the experimental species, (3) the examination of the experimental lesions caused by the strains of aerobic saprophytic *Actinomyces* isolated at Algiers, and (4) general observations on the pathogenicity of these isolates to laboratory animals. The isolates and their provenance were as follows: *Proactinomyces* [*Actinomyces*] *asteroides* from the scalp, *A. albus* from anti-smallpox vaccine, *A. chromogenus*, *A. aureus*, *A. exfoliatus*, and an undetermined strain from plant detritus undergoing conversion into humus by the Indore method, *A. plurichromogenus* and *A. alboflavus* from samples of human hair from Madagascar, and an undetermined strain from bovine hairs.

860. TOWNROW (V.) & BARRIE (H. J.). **Fatal *Actinomyces* infection of the middle ear.**—*J. Laryng.*, lx, 7, pp. 329–330, 1 pl., 1945.

The clinical course and autopsy findings in a case of actinomycosis of the middle ear (*Actinomyces bovis*) in a 64-year-old male patient in a Sheffield hospital are briefly reported.

861. BECKER (F.). **Eine seltene Kombinationserkrankung: gleichzeitiges Vorkommen von Aktinomykose und Krebs.** [A rare illness of mixed origin: simultaneous occurrence of actinomycosis and cancer.]—*Praxis*, xxxvi, 19, pp. 319–320, 1947.

This is a clinical report from the Cantonal Hospital, Chur, Switzerland, on a case of joint actinomycosis and carcinoma of the buccal mucous membrane in a 42-year-old male. Combined X-ray and chemotherapy (20 per cent. elkasin) resulted in complete elimination of the actinomycotic focus and local healing of the carcinoma, but extensive metastases from the latter brought about a fatal termination.

862. LAMB (J. H.), LAIN (E. S.), & JONES (PHYLLIS E.). **Actinomycosis of the face and neck.**—*J. Amer. med. Ass.*, cxxxiv, 4, pp. 351–360, 5 figs., 1 diag., 1947.

Sixteen cases of cervico-facial actinomycosis are reported, one aerobic and 15 anaerobic. Granule formation appears to be an antibody-antigen reaction of the causal organism to adverse environmental conditions in the host. The one aerobic species investigated was responsible for primary cutaneous actinomycosis. In uncomplicated cases of the anaerobic type the best treatment was found to consist of local filtered roentgen radiation and the oral administration of sulphadiazine. Where the disease is accompanied by osteomyelitis of the mandible surgical intervention may be necessary.

863. KLINEFELTER (H. F.) & HUMPHRIES (W. C.). **Cervical actinomycosis with embedded foreign body and without sinus formation.**—*Ann. intern. Med.*, xxvii, 4, pp. 638–640, 1947.

A 30-year-old private in the Army of the United States was successfully treated for cervical actinomycosis, developing ten days after injury to the mucous membrane of the oro-pharynx with a straw, by massive chemotherapy with penicillin, sulphadiazine, and potassium iodide, and surgical excision of the glandular swelling in the left side of the neck. A straw 1 cm. in length was found embedded in the diseased tissue: sinus formation did not occur.

864. SENFT (G.). **Ein anaerober Aktinomyzeten als Erreger bei Sepsis nach Angina.** [An anaerobic Actinomycete as agent of sepsis following angina.]—*Dtsch. med. Wschr.*, lxx, 13–14, pp. 190–191, 1944. [Received April, 1947.]

The case is reported of a 17-year-old female patient at the Mannheim Municipal Hospital who succumbed to sepsis with pulmonary metastases following angina. An anaerobic Actinomycete, a non-pathogenic spore-forming bacillus, and *Staphylococcus pyogenes aureus* were cultured from the blood.

865. KOLONJA (S.). **Aktinomykose der weiblichen Genitalorgane.** [Actinomycosis of the female genital organs.]—*Wien. klin. Wschr.*, lviii, 42, pp. 684–686, 1 fig., 1946.

A full account is given of the clinical course and autopsy findings in a case of actinomycosis, originating in the appendix and subsequently involving the uterus, in a 58-year-old woman in Vienna.

866. CALERO (C.). **Pulmonary actinomycosis (report of the first case observed in the Isthmus of Panama).**—*Dis. Chest*, xii, 5, pp. 402–408, 10 figs., 1946. [Spanish summary.]

The first case of pulmonary actinomycosis with multiple fistulae of the thoracic wall is reported from the Isthmus of Panama, occurring in a 12-year-old female patient at the Santo Tomas Hospital, Panama City. *Nocardia* [*Actinomyces*] *asteroides* was isolated on Sabouraud's medium and blood agar from the pus of the fistulae. An apparent cure was effected by the administration of a total of 7,500,000 Oxford units of penicillin and other general therapeutic measures, but a minimum period of 18 months must elapse before the permanency of the recovery can be regarded as established.

867. KAY (E. B.). **Bronchopulmonary actinomycosis.**—*Ann. intern. Med.*, xxvi, 4, pp. 581–593, 5 figs., 1947.

Careful scrutiny of 240 patients with chronic bronchopulmonary infections at the Kennedy General Hospital, Memphis, Tennessee, during the period from May to November, 1945, revealed the presence of *Actinomyces bovis* in the sputa of 109, in 65 of whom the organism was also harboured in the bronchial exudates. From 37 of these subjects with bronchiectasis, aspiration

pneumonia, lung abscesses, and pulmonary suppuration, the fungus was isolated in addition to other organisms, but its presence did not appear significantly to influence the clinical course of such chronic bronchopulmonary infections.

868. SCHAUB (C.). **Die Lungenaktinomykose im Röntgenbild.** [Pulmonary actinomycosis in radiography.]—*Radiol. clin.*, xiv, 5, pp. 233–261, 10 figs., 1945. [English, French, and Italian summaries. Received October, 1947.]

In seven cases of pulmonary actinomycosis among patients at the Bürger Hospital, Basel, one rounded shadow was detected in the right middle zone. Homogeneous or homogeneous and mottled shadows were seen in two cases in the right upper zone, once in the left upper, and once in the left lower zone. In one case of haematogenous diffusion, the mottling was bilateral, mostly in the middle lower zones.

All the opacities in this series might have been due to one or more diseases of the lungs, indicating that radiography alone is inadequate either for the confirmation of suspected mycosis or, even more important, for the exclusion of such a condition.

869. MAZZEI (E. S.). **Actinomicosis pulmonar. Enfisema broncogéno. Plétora abdominal. Espondiloartrosis.** [Pulmonary actinomycosis. Bronchogenic emphysema. Abdominal plethora. Spondylo-arthritis.]—*Prensa méd. argent.*, xxxiv, 9, pp. 394–405, 12 figs., 1947.

In connexion with a case of pulmonary actinomycosis (*Actinomyces israeli*) [*A. bovis*] in a 43-year-old male patient at a Buenos Aires hospital, the author fully discusses, with references to the pertinent literature, various aspects of the disease and associated conditions.

870. SHORVON (L. M.) & PEARSON (RUTH). **An unusual case of actinomycosis of the lung and thyroid.**—*Brit. J. Tuberc.*, xli, 3, pp. 64–68, 2 figs., 1947.

A description is given of the clinical course and autopsy findings in a case of actinomycosis of the lungs and thyroid in a 50-year-old male patient, an ex-Army colonel from India, at the Mount Vernon Hospital, London. The case presents a number of unusual features besides the very rare involvement of the thyroid gland.

871. DECKER (H. R.). **The treatment of thoracic actinomycosis by penicillin and sulfonamide drugs.**—*J. thorac. Surg.*, xv, 6, pp. 430–440, 6 figs., 1947.

The author concludes from personal experience and a study of the pertinent literature that penicillin is the best therapeutic agent in thoracic and other forms of actinomycosis (*Actinomyces bovis* and *Nocardia* [*A.*] *asteroides*). Administered early, it will consistently arrest the disease and bring about recovery in any age-group, and in most cases will effect an improvement even where the illness is of long standing and other drugs have failed. The concomitant use of sulphonamide drugs may prove extremely helpful in clearing secondary pyogenic infection.

872. FARRIS (E. M.) & DOUGLAS (R. V.). **Abdominal actinomycosis.**—*Arch. Surg.*, liv, 4, pp. 434–444, 2 figs., 1947.

Following a brief survey of the literature on abdominal actinomycosis (*Actinomyces bovis*), the authors report the successful results of surgical treatment combined with prolonged chemotherapy (sulphadiazine and penicillin) in five cases (all but one males) in Georgia.

873. BLEVINS (ANNE) & MACNEAL (W. J.). **Actinomyces septicus from human endocarditis.**—*Amer. Heart J.*, xxxi, 6, pp. 663–667, 1 col. fig., 1946.

Actinomyces septicus n. sp. is the name tentatively proposed for a branching, filamentous, irregularly Gram-positive, non-acid-fast organism isolated on four occasions in February, 1944, from the blood of a patient suffering from endocarditis at the New York Post-Graduate Medical School and Hospital. The pathogen coagulated milk and fermented dextrose, saccharose, maltose, and mannite, producing acid but no gas. The non-septate hyphae, of extremely variable diameter, were interrupted at irregular intervals by round, ovoid, olivary, or more elongated masses, 1 to 1.5 μ in transverse diameter, staining deep violet and usually sharply defined. [*Med. Mycol.* No. 447.]

874. MACNEAL (W. J.), BLEVINS (ANNE), & DURYEE (A. W.). **Clinical arrest of endocardial actinomycosis after forty-four million units of penicillin.**—*Amer. Heart. J.*, xxxi, 6, pp. 668–676, 15 graphs, 1946.

A 39-year-old man suffering from endocardial actinomycosis (*Actinomyces septicus*) [see preceding entry] responded favourably to intravenous and intramuscular injections of penicillin (a total of 43,972,000 units between 26th February and 21st November, 1944), the disease being arrested.

875. WEDDING (E. S.). **Actinomycotic endocarditis: report of two cases with a review of the literature.**—*Arch. intern. Med.*, lxxix, 2, pp. 203–227, 6 figs., 1947.

In one of the two cases of actinomycotic endocarditis reported in this paper from the Panama Canal Zone, the 37-year-old male patient presented the clinical picture of the disease, but in the other, a 71-year-old Jamaican negress, the condition was only recognized at the autopsy. In the former case, the inoculation of a rat produced pathological evidence of infection with *Actinomyces*, the organism being recovered in pure culture from pulmonary abscesses and pleural exudate. In the latter case, coccal structures, rods, and filaments were observed in vegetations of the aortic valve, from which an aerobic strain of *Actinomyces* was recovered. Although the original culture was contaminated, the smears, the histologic sections, and the subsequent cultures, together with the clinical history of the case, are considered to supply convincing evidence for a diagnosis of actinomycotic endocarditis.

876. SARTORY (A.) & BAILLY (CRISTIANE). **Un Actinomyces nouveau acido-alcool-résistant Actinomyces serophilus.** [A new acid-alcohol-resistant *Actinomyces*, *Actinomyces serophilus*.]—*C.R. Acad. Sci., Paris*, ccxxiv, 21, pp. 1533–1544, 1947.

Actinomyces serophilus n. sp. [without a Latin diagnosis], isolated from the urine of a male patient with suspected renal tuberculosis, is a strict aerobe with an optimum growth temperature of 35° to 37° and pH 6.5 to 7. On the most suitable media, viz., blood, serum, ascites-serum, and ascites-serum-blood agar, the yellowish-cream colonies gradually become plicate. The straight or curved, profusely branched hyphae measure up to 1.5 mm. by 0.4 to 0.5 μ and the terminal or intercalary arthrospores 0.4 to 0.5 μ in diameter. After 20 days' culture in hanging drops, the parasite disintegrates into bacillary elements, the arthrospores simulating streptococci. *A. serophilus* proved highly pathogenic to guinea-pigs and rabbits. The authors' study enabled the physician in charge of the case to diagnose renal actinomycosis and effect a clinical cure with potassium iodide.

877. AMBROSIONI (P.) & MERUCCI (E. L.). **Micetoma a grani rossi ad Hodeida nello Jemen.** [Mycetoma with red grains at Hodeida in the Yemen.]—*Riv. Parasitol.*, vi, 4, pp. 213–223, 5 figs., 1942. [Received 1946.]

This is an anatomo-histopathological, morphological, and cultural study of *Actinomyces pelletieri* var. *hodeidae* Ambrosioni & Merucci 1942, isolated from a red-grained mycetoma of the foot in a female native of the Yemen (Arabia).

878. CALERO (C.) & ORTIZ (P.). **Actinomycosis in a Hydrochoerus isthmus Goldman (Isthmian Capybara or Poncho).**—*Amer. J. trop. Med.*, xxvii, 3, pp. 377–381, 3 figs., 1947.

A case of presumed actinomycosis is reported in a nine-year-old male captive *Hydrochoerus isthmus* at the Gorgas Memorial Laboratory, Panama. The actinobacilliform rods in a tumour mass under the skin of the right forefoot showed a marked affinity for eosin and were Gram-negative and acid-fast, while the round, central, sporocytic bodies stained deeply with haematoxylin. The organism, which could not be specifically identified on account of the negative results of animal inoculations and attempts at culture, is tentatively referred to the genus *Actinomyces*.

879. GILL (W. D.). **Otomycosis: some comments concerning its incidence, symptomatology and treatment.**—*Sth. med. J.*, xl, 8, pp. 637–644, 3 figs., 1947.

Otomycosis is particularly important in the coastal areas of the southern States, where the moist, warm climate provides optimal conditions for the growth of the moulds concerned, among which *Aspergillus* spp. probably head the list in most localities, followed by *Penicillium* and *Mucor* spp. Other organisms that may be encountered include *Saccharomyces*, *Monilia* [*Candida*], and *Torula* spp.; a single instance of *T. histolytica* [*Cryptococcus neoformans*] infection of the auditory canal and pinna was investigated in the author's series of cases. The symptomatology of the disease and methods for its diagnosis are described and the present position of therapeutic measures against it discussed in the light of personal experience.

880. SHARP (W. B.), JOHN (M. B.), & ROBISON (J. M.). **Etiology of otomycosis.**—*Tex. St. J. Med.*, xlii, 6, pp. 380–382, 1946.

The fungi most frequently associated with otomycosis in the 20 culturally positive out of 40 cases studied at Galveston, Texas, were *Aspergillus niger* (9) and *A. flavus* (5), while *A. glaucus*, *Actinomyces* sp., and *Penicillium* sp. were also occasionally present. An abnormal physiological condition of the external auditory canal favours excessive fungal proliferation, which leads to the development of a thick, pulpy plug consisting largely of exfoliated epithelium and mould mycelium.

881. COOPER (N. S.). **Acute bronchopneumonia due to *Aspergillus fumigatus* Fresenius.**—*Arch. Path.*, xlii, 6, pp. 644–648, 4 figs., 1946.

Acute bronchopneumonia caused by *Aspergillus fumigatus* was an unexpected finding at the autopsy on a 45-year-old male patient at the New York Hospital who succumbed to duodenal ulcer and generalized peritonitis. The fungus was seen in histologic sections and isolated in virtually pure culture from the lungs. A similar type of bronchopneumonia was induced in rabbits by intratracheal injections of a spore suspension of the pathogen, which was reisolated in pure culture from the animals' lungs. After the lapse of several days the lesions in the rabbit became granulomatous, and ultimately they disappeared.

882. HUDSON (C. B.). **Aspergillus fumigatus infection in the eyes of baby Chicks.**—*Poult. Sci.*, xxvi, pp. 192–193, 1947. [V.B., xvii, 530.]

A description is given of lesions in the eyes of 10- to 11-day-old chicks marked by a cheesy pellet under the nictitating membrane. The cornea was not visibly affected. Of 15 chicks examined, only one was attacked in both eyes, while two showed lung lesions. *Aspergillus fumigatus* was also found in the eyes of three-week-old chicks in which ulceration of the cornea was present.

883. REWELL (R. E.) & AINSWORTH (G. C.). **Occurrence of *Aspergillus fumigatus* Fresen. in the lung of an American Bison.**—*Nature, Lond.*, clx, 4063, pp. 362–363, 1947.

A male American bison (*Bison bison*) about 12 years old, which had suffered from shortness of breath and cough each winter for several years, in the autumn of 1946 developed respiratory distress and died in a few days. Necropsy showed all the air passages to be lined with a thick-piled, green-grey mycotic mycelium. They did not appear to be dilated and the intervening lung showed only a moderate degree of fibrosis. Isolations from the lining of the air passages yielded pure cultures of *Aspergillus fumigatus*.

884. FRAENKEL (E. M.). **Bronchial-Asthma und Schimmelpilz-Allergie.** [Bronchial asthma and mould allergy.]—*Schweiz. med. Wschr.*, lxxvii, 3, pp. 115–116, 1947.

The writer refers to his earlier papers on the subject of moulds in relation to bronchial asthma in England (*Schweiz. med. Wschr.*, lxiv, p. 1193, 1934; *Brit. med. J.*, p. 68, 1938) and to other contributions in the relevant literature. Subsequent studies at the Southern Group Laboratory, Park Hospital, London, S.E. 13, confirmed previous observations as to the greater importance of moulds as an etiological factor in England than on the Continent, the most frequent excitants being species of *Sporotrichum*, *Cladosporium*, *Penicillium*, *Aspergillus*, *Mucor*, and *Monilia* [*Candida*].

885. HAMPTON (S. F.) & LOWE (E. P.). **Air-borne fungi in allergic disease. I. A new method of preparation of mold extracts; incidence of skin reactions with mold extracts. A preliminary report.**—*J. Allergy*, xvi, 2, pp. 101–108, 1945.

A new method of preparation of mould extracts for use in skin-testing and injection therapy in allergy is described. It involves the bulk growth of the particular species required on a modified Waksman's acid glucose-peptone broth in a series of 1-l. flasks for two to four weeks, washing of the pellicles with sterile normal saline, grinding them in the sterilized chamber of a Universal food-blender in the presence of sterile Coca's fluid (omitting the preservative), and transference to a sterile 1-l. flask for 48 hours for spore germination. The extraction ratio was 20 : 1 based on the estimated dry weight of the pellicles. Phenol was then added to the flask to make a final concentration of 0.5 per cent. and the flask placed in the refrigerator for a further 48 hours, after which the suspension was removed and filtered.

Of 358 patients with allergic disease (mostly aviation cadets between 18 and 27 years old) at the Army Air Forces Regional and Convalescent Hospital, San Antonio, Texas, and 92 non-allergic subjects, 57 of the former and none of the latter showed marked skin reactions when tested intracutaneously with extracts of the atmospheric moulds, *Alternaria*, *Hormodendrum*, *Spondylocladium*, and *Helminthosporium*. Of a total count of 562 colonies obtained by the exposed-plate method over the period from 20th October, 1943, to

20th January, 1944, 36.9 and 24 per cent. were species of *Hormodendrum* and *Alternaria*, respectively, positive reactions to which were given by 6.97 and 15.36 per cent., respectively, of the patients, the corresponding figures for the occasional colonies of *Spondylocadium* and *Helminthosporium* being 12.74 and 12.87 per cent., respectively. Of 54 persons with respiratory allergy reacting positively to the tests, 47 had eosinophiles in the nasal secretion.

886. BIEBERDORF (F. W.) & HAMPTON (S. F.). **Airborne fungi in allergic disease. II. Survey of airborne fungi in the San Antonio, Texas, area : incidence of skin reactions with mold extracts.**—*Ann. Allergy*, iv, 1, pp. 23–32, 3 graphs, 1946.

A 12-months' survey of air-borne moulds at San Antonio, Texas, by means of exposure plates and exposed vaseline-coated slides showed that as counted by the former method over 90 per cent. of the moulds observed (5,013 colonies) belonged to nine genera, which, in descending frequency of daily occurrence were *Hormodendrum*, *Alternaria*, *Helminthosporium*, *Spondylocadium*, *Fusarium*, *Pullularia*, *Phoma*, *Aspergillus*, and *Penicillium*. No definite indications could be obtained of seasonal trends in any one mould. Routine intradermal skin tests with extracts of the moulds were made on patients with allergic diseases; 186 or 12.28 per cent. of the 1,515 patients with proved allergic disease and only six of 488 normal controls tested showed definitely marked reaction. All but six of the 186 were cases of respiratory allergy and 30 reacted negatively to tests with pollen and inhalant extracts.

887. STILLWELL (D. E.), RIMINGTON (C.), & MAUNSELL (K.). **The allergens of house dust : comparison with products derived from moulds.**—*Brit. J. exp. Path.*, xxviii, 5, pp. 325–330, 1947.

A comparison has been made of the reactions given by allergic individuals to house dust antigen, the pooled extracts of 26 strains of mould grown in pure culture, the culture fluids obtained therefrom, and also to materials in which polysaccharides predominate isolated from *Penicillium roqueforti*, *P. tardum*, *P. capreolinum*, *P. funiculosum*, and *Caldariomyces fumago*. Five out of 36 patients were sensitive both to house dust and mould products and three to the former only. No one reacted positively to moulds and not to dust. Titration of threshold values in the skin showed no quantitative relationship between dust and mould sensitivity. Examination of three of the nitrogen-containing polysaccharide materials by chromatography after acid hydrolysis revealed the presence in them of several simple amino acids, in which respect they resembled, chemically, the purified antigen from house dust.

888. DEAMER (W. C.) & GRAHAM (H. W.). **Respiratory mold allergy—a 12 months' atmospheric survey in San Francisco.**—*Calif. Med.*, lxvi, 5, pp. 289–291, 1 graph, 1947.

A report is presented on the types and frequency of mould spores obtained in pure culture during the period from the beginning of October, 1942, to the end of September, 1943, in San Francisco, California. *Hormodendrum* was the most common of the fungi recognized, being represented by 567 colonies or 59.5 per cent. of the total. Next in order of prevalence was *Penicillium* (183 or 19.2 per cent.), while in the remaining 11 genera the incidence ranged from 25 to 42 colonies (2.4 to 4.5 per cent.). No striking seasonal changes in the abundance of the moulds were observed.

889. CAVALLERO (C.). **L'allergia e l'immunità nelle micosi. 5°. Allergia nelle malattie a presunta eziologia micotica. Malattie allergiche da funghi. Considerazioni generali e conclusioni.** [Allergy and immunity in mycoses. 5. Allergy in diseases of presumed mycotic etiology. Allergic diseases caused by fungi. General considerations and conclusions.]—*Mycopathologia*, iv, 1, pp. 1-24, 1947.

The author critically reviews recent papers by numerous workers dealing with allergy in various diseases attributed by some investigators to fungi and with allergic conditions of known fungal origin. He concludes with a general discussion of allergy and immunity, with special reference to the part played by allergy in the origin of mycoses, and its effect on the clinical picture and morphological manifestations presented by these diseases.

890. BLUMSTEIN (G. I.). **Mold allergy. II. Clinical analysis.**—*Ann. Allergy*, iii, 5, pp. 341-347, 1945.

Of 406 allergic individuals comprised in the author's study on clinical sensitivity at the Mt. Sinai Hospital, Philadelphia, 169 (41 per cent.) gave positive skin reactions to one or more of the 13 mould extracts used, among which etiological significance attached only to *Alternaria*, *Hormodendrum*, *Monilia* [*Candida*], *Helminthosporium*, *Cephalosporium*, and *Mucor*, in that order of importance. Twelve clinically sensitive mould subjects (3 per cent.) were found in this group, all of whom presented histories of seasonal allergies corresponding to the period of maximum mould concentration in the air. Ten of these patients were asthmatic and eight manifested some type of pollen sensitivity.

891. CURTIS (G. H.) & NETHERTON (E. W.). **Cutaneous blastomycosis. Report of two cases, one being a mucocutaneous form.**—*Cleveland clin. Quart.*, xiv, 1, pp. 47-54, 3 figs., 1947.

Two cases of North American blastomycosis (*Zymonema* [*Blastomyces*] *dermatitidis*) are described, both in males, one aged 60 resident in West Virginia and the other (49) in Ohio. The former was of the primary cutaneous type, the initial lesions being located on the forehead and the others induced by auto-inoculation. The latter appears to represent a rare form of the disease, in which the lesions originate in the larynx and mouth and later spread to the lips.

892. MEYER (ESTHER) & ORDAL (Z. J.). **The action of streptothricin and other antibiotic agents on *Blastomyces dermatitidis* infections of the Chick embryo.**—*J. infect. Dis.*, lxxix, 3, pp. 199-204, 1946.

Lesions were produced on the chorio-allantoic membrane of developing Leghorn chick embryos by inoculation with the yeast phase of *Blastomyces dermatitidis*. They were of three types, viz. (1) ulcerated vesicular, 6 to 15 mm. in diameter, of irregular contour, white to greyish-white, and frequently containing numerous petechiae; (2) ultimately identical in appearance with the foregoing, but developing through the coalescence of numerous small, whitish, discrete lesions; and (3) chronic granulomatous, 10 to 15 mm. in diameter, raised, indurated, with necrotic central areas surrounded by a wrinkling of the underlying membrane. The lesions were visible to the naked eye 24 hours after infection and continued to increase in size and severity for 48 to 72 hours, after which they remained stationary until the embryo was 18 days old, when spontaneous regression and atrophy ensued.

Streptothricin and gliotoxin were completely fungistatic to *B. dermatitidis* in *in vitro* tests at 10 units and 0.025 mg. per ml., respectively. Both drugs, however, proved toxic to the embryos in *in vivo* trials. Streptomycin and penicillin exerted no fungistatic action on *B. dermatitidis*.

893. BRODY (M.). **Blastomycosis, North American type : a proved case from the European Continent.**—*Arch. Derm. Syph., N.Y.*, lvi, 4, pp. 529–561, 1 fig., 1947.

Blastomyces dermatitidis was isolated in pure culture at the Kennedy General Hospital, Cleveland, Ohio, from lesions on the face and left ankle of a 24-year-old American soldier, who presumably contracted the infection during a ten-month period of duty in France. Martin and Smith, in an exhaustive review of the literature on North American blastomycosis (*Amer. Rev. Tuberc.*, xxxix, pp. 275–304, 1939), find only two proved cases of the disease outside the United States, one in Canada and the other in England, so that the present constitutes the first record for the continent of Europe. Large doses of iodides were beneficial in the author's case.

894. LEÃO (A. E. DE A.), CURY (A.), MELLO (M. T.), & GOTO (M.). **Blastomicose queiloideana ou doença de Jorge Lobo. Novas formas do parasito em cultura. (Nota prévia).** [Cheloid blastomycosis or Jorge Lobo's disease. New forms of the parasite in culture. (Preliminary note).]—*Hospital, Rio de J.*, 1946, pp. 929–935, 8 figs., 1946. [English summary.]

Glensporella lobo Fonseca & Arêa Leão, 1940, cultured in blood agar at 37° C., presented new forms reproducible by single and multiple budding. In some respects the types of reproduction observed under these conditions resemble those associated with the causal organism of Gilchrist's disease or North American blastomycosis [*Blastomyces dermatitidis*], while in others they are reminiscent of the agent of Lutz's disease or South American blastomycosis [*Paracoccidioides brasiliensis*]. These similarities suggest the possibility of referring all three fungi to the same genus as different species.

895. KRAINER (L.), SMALL (J. M.), HEWLITT (A. B.), & DENESS (T.). **A case of systemic *Torula* infection with tumour formation in the meninges.**—*J. Neurol., N.S.*, ix, 4, pp. 158–162, 5 figs., 1947.

A case of torulosis in a 32-year-old Sikh in an Indian military hospital is described. The meningeal focus presented the clinical and radiological picture of a lesion situated in the left frontal region. At operation a globular tumour was found sharply demarcated from the brain substance and attached to the dura mater. Histological examination revealed the typical features of *Torula granuloma*. An organism closely approximating to *Cryptococcus psychrophilicus* Niño, 1930 (Freeman's type III of *T. histolytica*) was isolated from a swelling in the right thigh before any signs of the cerebral tumour appeared.

896. HAMILTON (J. B.) & TYLER (G. R.). **Pulmonary torulosis.**—*Radiology*, xlvii, 2, pp. 149–154, 8 figs., 1946.

Following a review of the relevant literature and a summary of Swanson and Smith's case II of torular granuloma simulating cerebral tumour (*Arch. Neurol. Psychiat.*, li, pp. 426–431, 1944), the authors fully describe the clinical course and post-mortem findings in a 24-year-old member of the Women's Auxiliary Corps in Florida who succumbed in an Army General Hospital to pulmonary torulosis (*Torula histolytica*) [*Cryptococcus neoformans*] with metastases to the central nervous system. Chest roentgenograms revealed changes in the lungs far exceeding those to be expected from the relatively mild early symptoms before the extension of the disease to the central nervous system.

897. BONNE (C.). **Samenvattend overzicht over blastomycosen in het bijzonder die van Indonesië.** [Collective survey of blastomycoses, especially those of Indonesia.]—*Med. Maandbl.*, 1947, 10, pp. 186–194, 1947. [*T.D.B.*, xlv, 939.]

This is a critical survey of the blastomycoses, with special reference to those

occurring in Indonesia, namely, *Cryptococcus neoformans* (possibly), *Torula histolytica* (regarded by Conant *et al.* as a synonym of the preceding), *Phialophora verrucosa* and *Trichosporium* [*P.*] *pedrosoi*, *Histoplasma capsulatum*, and *H. farciminosum* [*C. farciminosus*] (confined to horses in the Archipelago).

898. DORMER (B. A.) & SCHER (P.). **Case report X: tumour of the lung due to *Cryptococcus histolyticus*.**—*Clin. Proc., Cape Town*, vi, 6, pp. 269–273, 6 figs., 1947.

A fatal case of lung tumour caused by *Cryptococcus histolyticus* [*C. neoformans*] and culminating in meningitis in a 17-year-old male Indian patient at the King George V Hospital, Durban, is briefly described.

899. SEGRETAİN (G.) & DROUHET (E.). **Torulose expérimentale.** [Experimental torulosis.]—*C. R. Acad. Sci., Paris*, ccxxiv, 25, pp. 1783–1784, 1 fig., 1947.

Particulars are given of the changes induced in the organs of mice and guinea-pigs by inoculation with *Torulopsis histolytica* (*T. neoformans*) [*Cryptococcus neoformans*], isolated from the cephalo-rachidian fluid of a female patient suffering from meningitis, and with the fluid itself. The mice succumbed to intraperitoneal, intraveinal, and intracerebral injections after periods of 6 to 21 days, while the guinea-pigs survived intraperitoneal inoculation for 45 days. In mice the disease, which is obviously propagated through the blood stream, assumed a generalized form, whereas in guinea-pigs infection was virtually confined to the central nervous system. The lesions contained spherical bodies of variable size, surrounded by a dense membrane and encircled by a lytic zone, some budding forms, and (in the brain of the guinea-pig) moniliform elements.

900. DEBRÉ (R.), LAMY (M.), LEBLOIS (C.), NICK (J.), GRUMBACH (Mlle), & NORMAND (E.). **Sur la torulose. Étude clinique et expérimentale. (À propos d'un cas observé chez un enfant atteint de lymphogranulomatose maligne).** [On torulosis. Clinical and experimental study. (In connexion with a case observed in a child suffering from malignant lymphogranulomatosis.)]—*Ann. paediat.*, clxviii, 1, pp. 1–33, 15 figs., 1947. [German and English summaries.]

The authors describe in great detail from Paris a case of torulosis (*Torula histolytica*) [*Cryptococcus neoformans*] supervening on malignant lymphogranulomatosis in a 12-year-old boy. The autopsy revealed, besides the adenopathia and lesions in the liver and spleen typical of Hodgkin's disease, whitish, punctiform bodies on the pia mater and, in nearly all the organs, circular or oval, yeast-like elements resembling those recovered from the rachidian fluid during life. Guinea-pigs and mice reacted to intraperitoneal inoculation by the development of characteristic lesions and eventually succumbed.

901. HASSIN (G. B.). **Torulosis of the central nervous system.**—*J. Neuropath. exp. Neurol.*, vi, 1, pp. 44–60, 12 figs., 1947.

Descriptions are given of the clinical picture and post-mortem examination results in two cases of torulosis caused by *Torula histolytica* (*Cryptococcus hominis* or *Debaryomyces neoformans*) [*C. neoformans*] in Chicago. Both patients were males, one aged 49 and the other 46. The course of the disease was chronic in the former case (cerebellar tumour) and acute in the latter, involving the cerebro-spinal system.

902. MOODY (A. M.). **Asphyxial death due to pulmonary cryptococcosis, a case report.**—*Calif. Med.*, lxvii, 2, pp. 105–106, 1947.

Following the post-mortem examination on a 38-year-old Mexican labourer with suspected pulmonary tuberculosis at the Southern Pacific General Hospital, San Francisco, the author's histological studies of specimens of the affected organs revealed the causal organism as *Cryptococcus neoformans*.

903. GREENING (R. R.) & MENVILLE (L. J.). **Roentgen findings in torulosis. Report of four cases.**—*Radiology*, xlviii, 4, pp. 381–388, 5 figs., 1947.

Only four cases of torulosis (*Cryptococcus neoformans*) occurred among 537,135 admissions to the Charity Hospital of Louisiana, New Orleans, over a period of ten years. When the lungs are involved, roentgenograms made in the early stage reveal small, circumscribed, patchy areas of consolidation tending to become confluent, with or without cavity formation. The bases of the lungs are most often affected. When healing occurs it is by fibrosis. In one of the four proved cases here recorded (all in males, three coloured and one white, the youngest five and the oldest 52), the lung lesion was single, in the others multiple.

904. MAGER (J.) & ASCHNER (M.). **Starch reaction as aid in identification of causative agent of 'European blastomycosis'.**—*Proc. Soc. exp. Biol., N.Y.*, lxii, 1, pp. 71–72, 1946.

A method is described for the identification of *Cryptococcus neoformans* based on the ability of the fungus to produce extracellular starch on a synthetic medium containing ammonium sulphate and thiamine at 37° C.

905. MAGER (J.) & ASCHNER (M.). **Biological studies on capsulated yeasts.**—*J. Bact.*, liii, 3, pp. 283–295, 1947.

In tests of 37 yeasts belonging to 15 genera it was found that the ability to elaborate extracellular starch is restricted to capsulated non-fermenting asporogenous yeasts, including *Torulopsis* [*Cryptococcus*] *neoformans*. *Candida albicans*, *Geotrichum* [*Blastomyces*] *dermatitidis*, and 23 other strains were starch-negative.

906. BARNARD (P. J. J.). **Meningitis due to *Torula histolytica*.**—*Proc. Transv. Mine med. Offrs' Ass.*, xxv, 276, pp. 92–94, 1945. [Received December, 1947.]

A case is presented of meningitis due to *Torula histolytica* [*Cryptococcus neoformans*] in a male native aged 20. The patient was admitted to hospital on 20th March, 1945; on 27th, treatment with oral sulphadiazine was begun, but was stopped because of the patient's rise in temperature. On 1st May, penicillin treatment was undertaken, 450,000 units being administered in five days. Immediately after, treatment with potassium iodide was started, this continuing till death, 36 days later. Autopsy showed a glairy, white exudate in the interpeduncula fossa of the brain and along the lateral fissures. On section, the subarachnoid space contained numerous lymphocytes, fibrin, and an occasional yeast-like body.

907. LECCISOTTI (G.). **Miceti come precipitogeni. (Saggi di precipitazione con due *Criptococchi* patogeni per l'Uomo.)** [Fungi as precipitogens. (Precipitation tests with two *Cryptococchi* pathogenic to Man).]—*Pathologica*, xxxii, 584, pp. 254–255, 1940. [German and English summaries. Received 1946.]

Precipitation tests were carried out on rabbits with two species of *Cryptococcus* which had acted as effective agglutinogens in previous experiments. In the present series precipitins were induced by *Cryptococcus pinoyisimilis*, an agent of tonsillitis, but not by *C. uvae*, isolated from a case of glossitis.

908. LEACH (B. E.), FORD (J. H.), & WHIFFEN (ALMA J.). **Actidione, an antibiotic from *Streptomyces griseus*.**—*J. Amer. chem. Soc.*, lxix, 2, p. 474, 1947.

Streptomycin-producing strains of *Streptomyces griseus* have been found to yield a second antibiotic designated actidione, with little or no activity against bacteria but strongly inhibitory to many yeasts, including *Cryptococcus neoformans*, the growth of which was suppressed at a minimum concentration of the crystalline product of 0.0002 mg. per ml. Intravenous toxicity tests on mice indicate an LD₅₀ of approximately 150 mg. per kg.

909. COX (L. B.) & TOLHURST (JEAN C). **Human torulosis : a clinical, pathological and microbiological study with a report of thirteen cases.**—149 pp., 67 figs., Melbourne, Melbourne University Press, 1946. 25s. [Review in *Aust. N.Z.J. Surg.*, xvi, 2, p. 157, 1946.]

This monograph is stated to be 'an admirable account of *Torula* [torulosis due to *Cryptococcus neoformans*] infection in the human subject. The matter is approached from clinical, pathological, and microbiological aspects and may be regarded as an authoritative statement of present knowledge. . . . Particular interest is attached to the section in which fungous infections of the respiratory system are admirably discussed. The case report of the coincident infection by *Torula* and tuberculosis is of great clinical interest. The morphology in human and animal tissues and in cultures is adequately discussed. . . . The morbid anatomy and histology of the disease in [the authors'] cases are systematically elaborated. . . . There is a separate chapter on the laboratory diagnosis from examination of the cerebro-spinal fluid, sputum, cultures from naso-pharynx, and blood cultures. . . . The authors discuss the source of torular infection. . . . [They] believe that the primary implantation is usually in the lungs, from which dissemination takes place to the central nervous system and other organs by the blood stream.'

910. MIDER (G. B.), SMITH (F. D.), & BRAY (W. E.). **Systemic infection with *Cryptococcus neoformans* (*Torula histolytica*) and *Histoplasma capsulatum* in the same patient.**—*Arch. Path.*, xliii, 1, pp. 102–110, 12 figs., 1947.

At Charlottesville, Virginia, a 12-year-old coloured boy died about three months after the onset of a subacute febrile illness. *Cryptococcus neoformans* and *Histoplasma capsulatum* were cultured from the blood and from exudate, and lesions induced by both fungi were revealed by the post-mortem examination.

911. DA FONSECA (O.). **Granulomatoses blastomycoides benignes.** [Benign blastomycoid granulomatoses.]—*Bull. Acad. Méd., Par.*, cxxx, 39–40, pp. 719–721, 1946.

In addition to the severe and usually fatal blastomycoid granulomatoses, there is a benign group, localized in the skin and responding readily to therapeutic treatment, of which two have been described from Brazil, one caused by *Glenospora lobo* Da Fonseca & Arêa Leão, 1940, and the other by *G. amazonica* Da Fonseca, 1943.

912. LUNA (D. F.), CASET (I. E.), & ABBATE (E. A.). **Nueva observación de paracoccidioidomicosis (forma buco-laríngeo-pulmonar).** [New observation of paracoccidioidomycosis (bucco-laryngo-pulmonary form).]—*Rev. Asoc. méd. argent.*, lxi, 611, pp. 571–575, 14 figs., 1947.

This is a detailed clinical study of a case of bucco-laryngo-pulmonary paracoccidioidomycosis (*Paracoccidioides brasiliensis*) in a 34-year-old male patient at the National Central Hospital, Buenos Aires. The oral administration of sulphamerazine (total of 237 gm.) resulted in a marked improvement.

913. MARANO (A.) & NIÑO (F.). **Localización ganglionar del *Paracoccidioides brasiliensis*.** [Ganglionic localization of *Paracoccidioides brasiliensis*.]—*Rev. Asoc. méd. argent.*, lxi, 611, pp. 570–571, 3 figs., 1947. [English summary.]

The authors made a histological study of material, obtained by biopsy, from the cervical lymph nodes of a 28-year-old male of the province of Tucuman, with a swelling of the neck of six months' duration. *Paracoccidioides brasiliensis* was present in large numbers, accompanied by an inflammatory reaction with giant cells.

914. NIÑO (F. L.). **Granuloma paracoccidioidico. Estudio de una nueva observación en la República Argentina (nota previa).** [Paracoccidioidal granuloma. Study of a new observation in the Argentine Republic (preliminary note).]—*Rev. Asoc. méd. argent.*, lix, 562, pp. 830–834, 6 figs., 1 diag., 1945.

A clinical and mycological report is presented on a case of paracoccidioidal granuloma (*Paracoccidioides brasiliensis*) in a 44-year-old male resident of Buenos Aires.

915. NIÑO (F. L.). **Granuloma paracoccidioidico curado con sulfadiazina.** [Paracoccidioidal granuloma cured with sulphadiazine.]—*Bol. Inst. Clin. quirúrg.*, xxii, 176, pp. 7–27, 6 pl., 8 figs., 1 diag., 1947. [English summary.]

This is a clinical and mycological study of a case of paracoccidioidal granuloma (*Paracoccidioides brasiliensis*) in a 44-year-old male Brazilian in Buenos Aires, who was restored to health by the administration of 401 gm. sulphadiazine over a period of 20 months. This is the first record of a cure of the disease by the drug in question in Argentina.

916. MOSTO (D.) & IARICCI (V.). **Presentación de un caso de granuloma por 'Paracoccidioides brasiliensis'.** [Presentation of a case of granuloma caused by *Paracoccidioides brasiliensis*.]—*Rev. Asoc. méd. argent.*, lix, 562, pp. 826–830, 11 figs., 1945.

In addition to summaries of three cases of granuloma due to *Paracoccidioides brasiliensis* already published, the author describes a new one involving the mucous membrane of the mouth and tongue in a 48-year-old male resident of Buenos Aires. Clinical and radiological evidence was obtained of pulmonary lesions in the same patient.

917. SILVA (M. S.). **Blastomicose pulmonar (paracoccidioidose pulmonar).** [Pulmonary blastomycosis (pulmonary paracoccidioidosis).]—*Rev. brasil. Med.*, iii, 9, pp. 723–731, 9 figs., 1946. [*T.D.B.*, xlv, 538.]

After discussing the classification and nomenclature of the causal organism [*Paracoccidioides brasiliensis*] the author states that most of those attacked by pulmonary blastomycosis follow some agricultural occupation or are employed on work that brings them in contact with the soil. That cutaneous, mucous, glandular, and visceral localizations are reported as uncommon is probably because the lesion present is not diagnosed early; X-ray examination of the lungs may lead to correct diagnosis. Radiologically, the findings are more extensive than in pulmonary tuberculosis, nearly always bilateral and symmetrical, and seldom show cavity formation. Cough and expectoration, dyspnoea, rise of temperature, and night sweats are usually present. Diagnosis is facilitated by sputum examination. Buccal or oropharyngeal and laryngeal symptoms precede the pulmonary. Early treatment by sulphonamides is fairly satisfactory. Penicillin has given no benefit.

918. FERGUSON (ROSALIE) & UPTON (MARGARET F.). **The isolation of *Paracoccidioides brasiliensis* from a case of South American blastomycosis.**—*Abs. in J. Bact.*, liii, 3, p. 376, 1947.

At St. Luke's Hospital, New York City, *Paracoccidioides brasiliensis* was isolated from a case of South American blastomycosis in a 23-year-old male patient who had contracted the disease in Colombia about three months before entering the United States. The fungus, showing multiple budding, was observed in sections from an axillary lymph node and grown in the mycelial phase from a lymph gland on blood veal agar in four weeks at room temperature. Transfers to Bordet-Gengou medium gave rise in a week to the multiple-budding yeast characteristic of the tissue form. This is believed to be the first record of the isolation of *P. brasiliensis* in the United States.

919. NEGRONI (P.). **Sobre el tratamiento de la blastomicosis sudamericana. A proposito de dos nuevas observaciones.** [On the treatment of South American blastomycosis. Concerning two new observations.]—*Rev. argent. Dermatosisif.*, xxx, 3-4, pp. 223-228, 1946. [French and English summaries.]

Two male patients, one aged 49 and the other 30, were cured of South American blastomycosis (*Paracoccidioides brasiliensis*) by the simultaneous administration of sulphonamides (sulphadiazine, sulphamerazine, and sulphathiazole) at the rate of 4 gm. daily for four consecutive days, followed by three days' intermission. A complementary treatment consisted of water-soluble vitamins (complex B and vitamin C) and local applications of sulphathiazole.

920. DOWDING (ELEANOR S.). **The pulmonary fungus, *Haplosporangium parvum*, and its relationship with some human pathogens.**—*Canad. J. Res.*, Sect. E, xxv, 5, pp. 195-206, 3 pl., 2 figs., 1 map, 1947.

Haplosporangium parvum was obtained in culture from the lungs of eight wild rodents in Alberta showing macroscopically visible pearl-bodies. The position of this fungus among the Phycomycetes was confirmed by a study of the reproductive structures, which may be interpreted as sporangia containing one or, rarely, several spores. *H. parvum* grows and sporulates on soil. The sporangia are adhesive and transferred by contact. At 37° C., they enlarge to ten times their diameter and form thick-walled chlamydospores germinating at room temperature. In the lung, the fungus has a diameter 50 times that of the sporangium from which it originated. Some human systemic Phycomycetes, like *H. parvum*, are filamentous in their saprophytic, and unicellular in their parasitic, phase. Of them, *Blastomyces dermatitidis*, *B. [Paracoccidioides] brasiliensis*, and *Histoplasma capsulatum* are closely related to *H. parvum*. In their saprophytic phase, they all reproduce by adhesive conidia, which can be regarded as sporangia with single endospores; no sporangia have been found in the parasitic phase. *Coccidioides immitis* is less close to *H. parvum*. When growing saprophytically it reproduces by air-borne conidia; when growing parasitically, by endospores. During the survey no evidence of the occurrence of the fungus in rodents was obtained and it is concluded it is not present in Alberta.

921. JAMISON (H. W.) & CARTER (R. A.). **The roentgen findings in early coccidioidomycosis.**—*Radiology*, xlviii, 4, pp. 323-332, 9 figs., 1947.

Coccidioidomycosis (*Coccidioides immitis*) should be suspected in the case of any person recently returned from an endemic zone of infection who presents symptoms of a respiratory disease. The diagnosis is established with certainty by a positive complement-fixation or precipitin test or by recovery of the causal organism from the sputum by culture or guinea-pig inoculation. In the acute pneumonic phase of the disease the roentgen appearance is non-specific and ordinarily insufficient for the differentiation of coccidioidomycosis from primary atypical pneumonia, rheumatic pneumonitis, and other respiratory infections. Residual 'burned-out' nodular or cyst-like foci of coccidioidomycosis are characteristic in roentgenograms, and are seldom confused with other conditions when occurring in endemic regions. They may be simulated, however, in cases of primary tuberculosis, metastatic carcinoma, congenital cyst, adult tuberculosis, lung abscess, certain mycoses, e.g. geotrichosis and torulosis, and pyogenic infections. Most of the fatalities in coccidioidomycosis occur among patients with pronounced mediastinal adenopathy. In such cases the alternatives to be considered in the differential diagnosis are Hodgkin's disease, pulmonary tuberculosis, sarcoidosis, and bronchiogenic carcinoma.

922. WHIMS (C. B.). **Coccidioidal meningitis.**—*Bull. U.S. Army med. Dep.*, vii, 5, pp. 466–471, 1947. [*T.D.B.*, xliv, 933.]

The author describes two fatal cases of disseminated coccidioidal granuloma in which apparent localization of the infection to the meninges followed shortly after the primary stage. In both, symptoms of meningeal disease or increased intracranial pressure were the outstanding clinical features. The coccidioidin skin reaction was absent in one case, feeble in the other. X-ray examination showed in one case signs of internal hydrocephalus and in the other complete blockage at the level of the fifth cervical vertebra, found due to dense adhesions between the three membranes, and a granulation tissue with pearly nodules on the dural surface. Bodies resembling spherules of *Coccidioides immitis* were found in sections of these nodules and in the cerebrospinal fluid of the other case, but their identity was not clearly established and all attempts to cultivate the fungus failed. Diagnosis in both cases was based on the complement-fixation reaction with *Coccidioides* antigen and the exclusion of other probable causes of chronic meningitis.

923. BASS (H. E.), KOOPERSTEIN (S. I.), FRIEDMAN (M. M.), & KASTLIN (G. H.). **Pulmonary coccidioidomycosis.**—*Dis. Chest*, xii, 5, pp. 371–383, 16 figs., 1946. [Spanish summary.]

The pathogenesis of primary pulmonary coccidioidomycosis (*Coccidioides immitis*) is reviewed and the roentgenographic changes taking place in the lungs are described and illustrated. The initial pneumonitis caused by the fungus may resolve completely or leave a residue of nodular shadows, enlargement of hilar lymph nodes, cavities, or parenchymal scars. The disease requires to be distinguished from various maladies which it may simulate, e.g. pulmonary tuberculosis, sarcoidosis, other fungal infections, and atypical pneumonia.

This paper, presented at a joint meeting of the American College of Chest Physicians and the Southern Medical Association, at Cincinnati, Ohio, on 12th November, 1945, was followed by a discussion (pp. 383–386).

924. ROSENTHAL (S. R.) & ROUTIEN (J. B.). **The infectiousness of coccidioidomycosis.**—*Science*, civ, 2708, p. 479, 1947.

Evidence has been secured, by inoculation experiments on guinea-pigs at the Bruns General Hospital, Santa Fé, New Mexico, that the spherules representing the sporangial stage of *Coccidioides immitis*, obtained directly from human or animal sources, are infective through the respiratory tract. In the light of these findings it will be necessary to revise the current opinion that coccidioidomycosis is non-contagious, and that stringent precautions in regard to the isolation of active cases are therefore superfluous.

925. CIRENEI (A.). **Contributo allo studio di una micosi granulomatosa (coccidioidomycosi). La micosi negli stati di modificata funzionalità tiroidea.** [Contribution to the study of a granulomatous mycosis (coccidioidomycosis). The mycosis in the state of modified thyroid functionality.]—*Boll. Soc. ital. Biol. sper.*, xxiii, 1–2, pp. 20–21, 1947.

Inoculation experiments were carried out with the causal organism of coccidioidomycosis (*Coccidioides immitis*) on three lots of guinea-pigs, one of which was subjected ten days previously to thyroidectomy, a second received injections of total thyroid extract in doses corresponding to 25 mg. of fresh gland, on alternate days during the same period, while a third was given no treatment. The disease assumed a graver character in the thyroidectomized animals than in the untreated or those supplied with glandular extract.

926. SWEIGERT (C. F.), TURNER (J. W.), & GILLESPIE (J. R.). **Clinical and roentgenological aspects of coccidioidomycosis.**—*Amer. J. med. Sci.*, ccxii, 6, pp. 652-673, 11 figs., 1 diag., 1946.

The present report is based on personal experience with 77 hospitalized cases of coccidioidomycosis (*Coccidioides immitis*) and a study of clinical and roentgenographic material from about 200 additional patients observed in southern Arizona between August, 1941 and August, 1945. The salient clinical, laboratory, and roentgenographic features are presented, with special reference to the changes and variations peculiar to different types and stages of the disease. The common X-ray patterns of progression and resolution are described. The persistence of coccidioidomycotic cavities and nodules for periods up to several years is emphasized in relation to future procedure in mass surveys of the chest. The essential criteria for diagnosis and the relative efficiency and limitations of various diagnostic methods are indicated. Three case histories are reported, illustrating different clinical patterns of disseminated coccidioidomycosis, one with apparent recovery from coccidioidal meningitis. The differential diagnosis and therapy of the disease are discussed.

927. BENGSTON (J. S.). **Coccidioidal granuloma.**—*Fed. Vet.*, II, 12, pp. 3-4, 1945. [*V.B.*, xvii, 529.]

After stating that granulomatous lesions due to *Coccidioides immitis* are becoming more prevalent both in animals and man in the United States, the author recapitulates the available information on the condition. Inoculations of pigs caused fatal generalized infection.

928. DAVIS (C. N.). **Fatal cerebral coccidioidomycosis. Report of case.**—*Amer. J. clin. Path.*, xvii, 4, pp. 325-328, 2 figs., 1947.

A post-mortem examination of the brain of a 24-year-old male patient at the Philadelphia Naval Hospital disclosed the presence of *Coccidioides immitis*. Coccidioidomycosis had not been suspected during life.

929. SMITH (C. E.). **Medical progress: recent progress in pulmonary mycotic infections.**—*Calif. Med.*, lxvii, 3, pp. 179-185, 1947.

This is a review, based on the perusal of 87 contributions to the pertinent literature, of the progress to date in the diagnosis and knowledge of the pulmonary mycoses caused by *Coccidioides immitis* and *Histoplasma capsulatum*.

930. RIFKIN (H.), FELDMAN (D. J.), HAWES (L. E.), & GORDON (L. E.). **Coexisting tuberculosis and coccidioidomycosis.**—*Arch. intern. Med.*, lxxix, 4, pp. 381-390, 7 figs., 1947.

Both *Coccidioides immitis* and *Mycobacterium tuberculosis* were isolated from the pleural fluid of a 27-year-old soldier, the coccidioidal infection having been contracted during a period of duty in a desert training area of California.

931. NEGRONI (P.) & RADICE (J. C.). **A proposito de Pseudococcidioides mazzai Fonseca, 1928 y de Trichosporon proteolyticum Negroni y Villafañe Lastra, 1939.** [Concerning *Pseudococcidioides mazzai* Fonseca, 1928 and *Trichosporon proteolyticum* Negroni & Villafañe Lastra, 1939].—*Rev. argent. Dermatosisif.*, xxx, 3-4, pp. 219-223, 6 figs., 1946. [English and French summaries.]

A comparative study of the microscopic morphology of *Trichosporon proteolyticum* [*Med. Mycol.*, No. 213] and *Pseudococcidioides mazzai* [*Coccidioides immitis*] in experimental lesions in guinea-pigs demonstrated the identity of the species. Observations on the structure of the parasite were greatly facilitated by the application of Wood's fluorescent light to preparations stained with primulin.

932. JAMISON (H. W.). **A Roentgen study of chronic pulmonary coccidiomycosis.**—*Amer. J. Roentgenol.*, lv, 4, pp. 396–412, 14 figs., 1946.

After discussing the history, epidemiology, pathogenesis, and clinical features of coccidioidomycosis (*Coccidioides immitis*), the author states that the coccidioidin skin test has a high degree of specificity and parallels the tuberculin test in its mode of action. Precipitin and complement fixation tests also proved valuable in diagnosis and prognosis. Ninety-six pulmonary infections which persisted for months or years are discussed according to predominant Roentgen manifestation, as follows: nodular parenchymal foci, cyst-like cavities, persistent pneumonitis, mediastinal and hilar adenopathy, pleural effusion, and miliary lung involvement, metastatic bone foci, and other evidences of dissemination. The Roentgen findings are correlated with associated clinical history; 23 nodular and 35 cystic foci were extremely indolent, benign, and slow in evolution. Mediastinal adenopathy was the predominant Roentgen character of nine fatally disseminated cases until the terminal stage of miliary spread. Negroes are about 100 times as likely to develop fatal disseminated coccidioidomycosis as whites. Whites more often develop a meningeal type of dissemination, while negroes show a higher incidence of subcutaneous abscesses.

933. PUFFER (RUTH R.). **Histoplasmosis y calcificaciones no tuberculosas del pulmon.** [Histoplasmosis and non-tuberculous calcifications of the lung].—*Rev. méd. Chile*, lxxv, 1, pp. 41–46, 1 graph, 4 maps, 1947.

The available information concerning histoplasmosis (*Histoplasma capsulatum*) and non-tuberculous pulmonary calcifications is summarized, with special reference to the studies of Christie and collaborators in Tennessee (in process of publication in *J. Pediat.*).

934. WORGAN (D. K.). **Histoplasmosis : a summary of the known facts about the disease.**—*Bull. Sch. Med. Univ. Md*, xxx, 3, pp. 69–79, 2 figs., 1945.

A brief review of the literature on histoplasmosis (*Histoplasma capsulatum*) is presented, and special references to general characteristics of the disease are noted. The protean nature of the disease and its wide dissemination in the system are revealed by reports of its occurrence in the journals of many branches of medicine and surgery. A case is described in a 20-year-old coloured male patient in a Baltimore hospital on whom a complete autopsy was performed.

935. **Histoplasmosis.**—*Brit. med. J.*, 1945 (ii), 4412, pp. 125–126, 1945.

This is an outline, with references to six outstanding contributions to the subject, of the history, incidence, symptomatology, diagnosis, and prognosis of histoplasmosis (*Histoplasma capsulatum*).

936. CAMPBELL (CHARLOTTE C.). **Reverting *Histoplasma capsulatum* to the yeast phase.**—*J. Bact.*, liv, 2, pp. 263–264, 1947.

Numerous strains of *Histoplasma capsulatum* cultured in the mycelial phase for many years have easily been reverted to the yeast phase, using the following medium: veal infusion (double strength) 1,000 ml., rabbit or horse blood 80 ml., peptone 10 gm., glucose 10 gm., sodium chloride 5 gm., cystine or cystine hydrochloride 1 gm., and agar 20 gm. In the yeast phase, the fungus can be readily cultured, harvested, and utilized in bacteriological techniques. Several serial transfers may be required for the reversion of old stock strains maintained in the mycelial form. Such strains should be transferred serially to new slants of the medium at intervals of two to three days even though no reversion is apparent. After three to seven transfers, small yeast colonies become notice-

able among the mycelial types, and by proper colony selection the pure yeast phase becomes obtainable, and can be maintained indefinitely by incubation at 37° C.

937. SALVIN (S. B.). **Cultural studies on the yeastlike phase of *Histoplasma capsulatum* Darling.**—*J. Bact.*, liv, 5, pp. 655–660, 1 fig., 1947.

Seventeen strains of *Histoplasma capsulatum* were grown in the yeast-like phase in a fluid medium composed of the following Difco products: proteose peptone 10 gm., neopeptone 3.25 gm., tryptone 3.25 gm., glucose 2 gm., sodium chloride 5 gm., disodium phosphate 2.5 gm., agar 1.75 gm., and distilled water to make 1,000 ml. Maximum growth occurred between pH 6.3 and 8.1 at 37° C. in a medium containing a mixture of organic nitrogen compounds. No growth developed unless the medium contained a small percentage of agar, silica gel, oil, or some substance exerting a similar function. Oxygen and carbon dioxide tensions were of little importance.

938. DUARTE (E.). **Histoplasmoses.** [Histoplasmosis.]—*Mem. Inst. Osw. Cruz*, xliii, 3, pp. 457–494, 7 figs., 1946.

The author summarizes and analytically tabulates 41 cases of histoplasmosis (*Histoplasma capsulatum*) from the relevant literature, together with a further seven unpublished but cited in various papers, and describes the clinical and post-mortem features of the disease in a 23-year-old coloured female in Rio de Janeiro. Though the mode of infection has not yet been definitely ascertained, the respiratory and digestive systems appear to be the most important portals of entry, changes in the lungs having been detected in 21 out of 38 necropsies (55.3 per cent.) and in the intestines in 17 (44.7). The higher incidence in the lymph nodes, liver, and spleen are attributed to secondary infections. Attention is drawn to the occurrence of the disease in children of a few months old, representing about 13 per cent. of all the known cases.

939. LAM (F. K.) & PRICE (S.). **Histoplasmosis in Man.**—*Hawaii med. J.*, vi, pp. 301–374, 1947. [Abs. in *J. Amer. med. Ass.*, cxxxv, 3, p. 187, 1947.]

A fatal case of histoplasmosis [*Histoplasma capsulatum*] is reported in a 45-year-old male, believed to be the first diagnosis of the disease for Hawaii. Infection was acquired in the Territory. The fungus was detected in the tissues at the post-mortem examination.

940. CURTIS (A. C.) & GREKIN (J. N.). **Histoplasmosis : a review of the cutaneous and adjacent mucous membrane manifestations with a report of three cases.**—*J. Amer. med. Ass.*, cxxxiv, 15, pp. 1217–1224, 7 figs., 1947.

The three cases of histoplasmosis (*Histoplasma capsulatum*), described from Michigan in connexion with a survey of the available information on the mycology of the pathogen and the cutaneous and mucous membrane manifestations of the disease and their treatment, concern a 30-year-old female and two negro males, one aged 42 and the other 23: the first patient succumbed. The paper, read at the 95th Annual Session of the American Medical Association, San Francisco, on 5th July, 1946, was followed by a discussion.

941. CONLIN (F. M.) & HANKINS (C. R.). **Histoplasmosis case report.**—*Nebr. St. med. J.*, xxxii, 3, pp. 101–103, 1947.

Micro-organisms corresponding morphologically with *Histoplasma capsulatum* but not cultured were revealed by the post-mortem examination of a 57-year-old female patient at the hospital of the Nebraska College of Medicine. This is believed to be the first report of histoplasmosis in the State.

942. NEGRONI (P.) & NEGRI (T.). **Un nuevo caso di histoplasmosis. Estudio micológico y terapéutico.** [A new case of histoplasmosis. A mycological and therapeutic study.]—*Rev. argent. Dermatosisif.*, xxx, 3-4, pp. 212-218, 4 figs., 1946. [French and English summaries.]

A case of histoplasmosis (*Histoplasma capsulatum*) in a 53-year-old male patient at the Rawson Hospital, Buenos Aires, is described. Infection was localized in the gum, with a submaxillary lymph node. The cutaneous reaction to histoplasmin was positive, but the complement-fixation test with the same antigen was negative. The simultaneous administration of specific vaccine and sulphonamides resulted in a cure.

943. WEED (L. A.), IAMS (A. M.), & KEITH (H. M.). **Histoplasmosis in infancy: the pathologic picture as seen in one case.**—*Arch. Path.*, xliii, 2, pp. 155-164, 8 figs. (1 col.), 1947.

A detailed account is given of the necropsy on an eight-month-old female infant born in Illinois and treated at the Mayo Clinic, Rochester, Minnesota, where cultures of the blood, sternal marrow, stools, and duodenal contents all yielded *Histoplasma capsulatum* in 5 to 20 days.

944. WARING (J. I.) & GREGG (D. B.). **Pulmonary calcifications and sensitivity to histoplasmin in Charleston, S.C.**—*Amer. J. Dis. Child.*, lxxiii, 2, pp. 139-142, 1 fig., 1947.

The incidence of sensitivity to histoplasmin (prepared extract from *Histoplasma capsulatum*) in schoolchildren at Charleston, South Carolina, was recently computed at less than 2 per cent. The development of calcified pulmonary lesions associated with histoplasmin sensitivity was found in this series of tests to be under 1 per cent. and appears to be primarily a problem of introduction from States within the area of high incidence of positive reactors [*Med. Mycol.*, Nos. 736, 742].

945. HIGH (R. H.), ZWERLING (H. B.), & FURCOLOW (M. L.). **Disseminated pulmonary calcification. A report of 113 cases.**—*Publ. Hlth Rep., Wash.*, lxii, 1, pp. 20-29, 1 graph, 1947.

The following observations were made on 64 cases of disseminated pulmonary calcification found in a survey of 15,980 schoolchildren in Kansas City, Missouri. The frequency among whites rose steadily from none in the under-four age group to 10 per 1,000 in that of 16 to 18 years. This type of calcification was less prevalent in negroes than among the white population—1.2 as compared with 4.5 per 1,000. A definite familial relationship was noted. Only one of the 64 patients presented roentgenographic abnormalities other than disseminated calcification. In no instance was such calcification detected among those reacting only to tuberculin, but in 58 (93.5 per cent. of the group) it was observed among histoplasmin reactors alone.

Of 49 other cases of disseminated calcification, 76.1 per cent. reacted only to histoplasmin and none to tuberculin alone. The percentages reacting to both antigens and neither were 19.6 and 4.3, respectively.

Of the total of 113 patients examined, 108 were given tuberculin and histoplasmin tests. Histoplasmin evoked positive responses in 104, while none reacted only to tuberculin. Disseminated calcifications would thus appear to be generally due to the agent inducing sensitivity to histoplasmin and only exceptionally to tubercle bacilli.

946. FEREBEE (SHIRLEY H.) & FURCOLOW (M.). **Histoplasmin sensitivity among siblings.**—*Publ. Hlth Rep., Wash.*, lxii, 23, pp. 834–847, 5 graphs, 1947.

The analysis of 1,744 children, lifetime residents in Kansas City, Missouri, 766 of whom had an older sibling reacting to histoplasmin (0.1 c.c. of a 1 in 1,000 dilution of a broth filtrate from a *Histoplasma capsulatum* culture) and 978 an older sibling not reacting to the test, showed a higher percentage of reactors in the former group, especially in the younger age-classes and where the difference in age between the siblings did not exceed two years.

947. ZWERLING (H. B.) & PALMER (C. E.). **Pulmonary calcification in relation to sensitivity to histoplasmin.**—*J. Amer. med. Ass.*, cxxxiv, 8, pp. 691–692, 1947. [*B.H.*, xxii, 637.]

The authors summarize earlier papers on the possible mycotic origin of calcified pulmonary nodules and the probability that the fungus concerned is *Histoplasma capsulatum*. They draw attention to the significance of dermal hypersensitivity to histoplasmin in these cases, where tuberculosis and coccidioidomycosis can be excluded from the diagnosis.

948. HIGH (R. H.). **Nontuberculous pulmonary calcification and histoplasmin sensitivity.**—*Penn. med. J.*, 1, 4, pp. 384–387, 1 fig., 1947.

A review of the literature on non-tuberculous calcification is presented and the correlation between this condition and sensitivity to histoplasmin (the antigen from *Histoplasma capsulatum*) is discussed. It is emphasized that the agent inducing sensitivity to histoplasmin is as yet unknown.

949. HOWELL (A.). **Studies of fungus antigens. I. Quantitative studies of cross-reactions between histoplasmin and blastomycin in Guinea Pigs.**—*Publ. Hlth Rep., Wash.*, lxii, 18, pp. 631–651, 9 graphs, 1947. [*B.H.*, xxii, 569.]

Three lots of histoplasmin, five of blastomycin, and heat-killed antigens prepared from yeast cultures of *Histoplasma capsulatum* and *Blastomyces dermatitidis* were tested on guinea-pigs experimentally infected with the two fungi named. It was shown that (1) the number of inoculated animals reacting to the antigens depends on the particular sample used and its dilution. (2) Although antigens prepared from cultures of *H. capsulatum* or *B. dermatitidis* will give reactions in guinea-pigs infected by either fungus, the percentage and extent of these cross-reactions vary with the dosage of the particular antigen employed. (3) If the critical titres of these antigens are determined and used in the study of cross-reactions, the degree of cross-reaction is found to be small and the antigens are, therefore, relatively specific for guinea-pigs inoculated with the homologous fungi. (4) The level of sensitivity of the animals used to determine the titre of an organism must be taken into consideration. That is to say, if the sensitivity level is low, a high concentration of the antigen will be required to elicit a reaction, thereby conveying a false impression of the critical titre. Such high concentrations of antigen will produce a corresponding percentage of cross-reactions.

950. OLSON (B. J.), BELL (J. A.), & EMMONS (C. W.). **Studies on histoplasmosis in a rural community.**—*Amer. J. publ. Hlth*, xxxvii, 4, pp. 441–449, 1 diag., 2 maps, 1947.

In September, 1945, when the fourth fatal human case of histoplasmosis (*Histoplasma capsulatum*) was recognized among the population of 20,000 of Loudoun County, Virginia, the authors began an intensive search for evidence of infection in man and animals. Of 886 of the latter captured and studied, only one rodent, *Mus musculus*, and one dog were found naturally infected.

Two other dogs of the same kennel had previously been found to harbour the fungus [*Med. Mycol.*, No. 698], and the rodent was trapped in the basement of the house to which the dogs belonged. Of 476 white persons examined, 83 per cent. gave a positive histoplasmin skin reaction at the initial test and 41 per cent. had calcified pulmonary lesions. No direct correlation, however, could be established between histoplasmosis and pulmonary calcification. On re-testing three to eight months later, 7 per cent. of the positives had become negative and 55 per cent. of the negatives had become positive.

951. PÄTIÄLÄ (R.). **Les agents étiologiques des blastomycoses en Finlande.** [The etiologic agents of blastomycoses in Finland.]-*Ann. Parasit. hum. comp.*, xxi, 5-6, pp. 342-344, 1 fig., 1946.

After pointing out that no clinical record of a case of blastomycosis in Finland has hitherto been published, the author states that the records of the University of Helsinki public hospital show only one or two cases between 1920 and 1940. Since then four cases were noted from the same hospital, from all of which *Candida albicans* was isolated. In the first, the fungus was obtained from a lesion on the abdomen of a six-year-old child, in the second from swellings on different parts of the body of a female patient aged 20 years, and in the third and fourth from a purulent dermatitis affecting a woman of 40 and one of about 20 years of age.

952. IRIARTE (D. R.). **Las micosis faringéas.** [The pharyngeal mycoses.]-*Bol. Lab. Clin. 'Luis Razetti'*, xv, 21-22, pp. 483, 485-487, 489-491, 2 figs., 1946.

Four cases of chronic tonsillitis are described from the author's practice at Caracas, Venezuela, in connexion with a discussion on the etiology of the so-called 'pharyngeal mycosis'. In his view this term should be discarded as inapplicable, since any fungi found associated with the condition of follicular hyperkeratosis of the tonsils, e.g., *Penicillium* spp. and *Candida krusei*, have so far proved to be quite innocuous and purely superficial.

953. LUTERAAN (P. J.) & DENIS (J.). **Application de la méthode auxanographique à l'étude des facteurs de croissance. De l'activité antibiotique de la lactoflavine à l'égard de certaines levures.** [Application of the auxanographic method to the study of growth factors. Of the antibiotic activity of lactoflavin in respect of certain yeasts.]-*C.R. Soc. Biol., Paris*, cxl, 3-4, pp. 131-133; 9-10, pp. 294-295, 1946.

Using the auxanographic method in a modified form, the authors studied the effects of various diffusible substances on the yeasts *Candida krusei* and *Torulopsis histolytica* [*Cryptococcus neoformans*]. Congo red and sodium fluoride acted as growth factors in respect of *Candida krusei*, while lactoflavin (vitamin B₂) inhibited the development of both organisms.

954. LUTERAAN (P. J.). **Du mécanisme de l'action antibiotique de la lactoflavine à l'égard de certains champignons.** [On the mechanism of the antibiotic action of lactoflavin in respect of certain fungi.]-*C.R. Soc. Biol., Paris*, cxl, 19-20, pp. 759-760, 1946.

The mechanism of the antibiotic action of lactoflavin on dextrose agar cultures of *Candida krusei* is summarized as follows. The pigment inhibits the enzymatic process at a certain stage of desmolysis between dextrose and the intermediate substances, succinic or citric acid. Moreover, it obstructs the assimilation of certain nitrogenous substances in the presence of intermediate products of hexose degradation, precluding their utilization by the yeast cell, which consequently perishes.

955. RAUBITSCHKE (F.). **The problems of moniliasis.**—*Acta med. orient.*, vi, 3, pp. 85–90, 2 figs., 1947.

Following a brief historical review of moniliasis from the etiological standpoint, the different cutaneous forms of the disease are discussed and a tabulated survey is given of 460 cases (mostly patients at the Rothschild–Hadassah University Hospital, Jerusalem), from which cultures were set up on dextrose agar. Negative results were given by 309, *Candida albicans* developed in 91, *C. tropicalis* in 25, *C. paratropicalis* in 1, *C. krusei* (including *C. parakrusei*) in 13, *C. brumpti* in 3, *C. guilliermondi* in 4, and *Cryptococcus* sp. in 11.

956. RUIZ-MORENO (G.). **Eczematoid monilid of the eyelids ('candidid').**—*Ann. Allergy*, v, 2, pp. 132–136, 6 figs., 1947.

Attention is drawn to the occurrence in Buenos Aires, chiefly among women, of an eczematous bilateral monilid, or rather 'candidid', of the eyelids, associated with the presence in the intestines or skin of *Candida albicans*, and generally developing in the spring or autumn. Therapy by means of subcutaneous injections of an aqueous extract of the fungus was generally successful.

957. SEGRETAIN (G.). **Étude de la maladie expérimentale d'un Lapin provoquée par un *Candida albicans* agent probable d'une mycose pulmonaire.** [Study of the experimental disease induced in a Rabbit by *Candida albicans*, the probable agent of a pulmonary mycosis.]—*Ann. Inst. Pasteur*, lxxiii, 7, pp. 674–676, 4 figs., 1947.

Candida albicans, isolated on Sabouraud's agar from the sputum of a male patient with pulmonary trouble of 18 years' standing, was inoculated into the ear of a rabbit, which succumbed after three days. The mode of development of the fungus in various organs is briefly described.

958. ZIMMERMAN (S. L.), FRUTCHHEY (L.), & GIBBES (J. H.). **Meningitis due to *Candida* (*Monilia*) *albicans* with recovery.**—*J. Amer. med. Ass.*, cxxxv, 3, pp. 145–147, 1 fig., 1 graph, 1947.

The primary interest in this case of meningitis caused by *Candida albicans* lies in the recovery of the patient, a 28-year-old male textile worker at Columbia, South Carolina. A perusal of the relevant literature indicates that this experience is unique. Streptomycin therapy is thought to have contributed to the favourable outcome of the illness.

959. ROBINSON (S. S.) & TASKER (S.). **Chronic latent oral moniliasis (thrush). Report of a case of twelve years' duration in which the disease was resistant to treatment.**—*Arch. Derm. Syph.*, N.Y., lv, 1, pp. 85–90, 3 figs., 1947.

A recent survey of 12 large dermatological clinics in the United States indicates that chronic latent oral moniliasis (*Monilia* [*Candida*] *albicans*) presents a problem in which timely therapy is an important factor. Reports of the development of leucoplakia and epithelioma from this condition in adults indicate its classification as precancerous. Treatment of vaginal moniliasis should be instituted, especially during pregnancy, to prevent infection of the foetus in its passage through the birth canal, as suggested in the case herein reported, in which the mother of a girl with chronic latent oral moniliasis of 12 years' duration suffered from both oral and vaginal infection of the same type.

960. SYKES (E. M.). **Fungus infections of the cornea : case report of keratomycosis due to *Monilia*.**—*Tex. St. J. Med.*, xlii, 5, pp. 330–332, 2 figs., 1946.

A diagnosis of *Monilia* [*Candida*] *albicans* infection, involving a dendritic type of corneal ulcer, probably of traumatic origin, in the left eye of a male patient at the Nix Hospital, San Antonio, Texas, was based on (1) clinical appearance; (2) stubborn, chronic, progressive course despite persistent therapy of the kind usually effective in such cases; (3) the laboratory report of the isolation of the pathogen on Sabouraud's media from corneal scrapings; and (4) the immediate beneficial effects of the internal administration of large doses of potassium iodide.

961. RAWSON (A. J.) & NORRIS (R. F.). **Common group antigen among *Candida albicans*, *Saccharomyces cerevisiae*, and *Hansenula anomala*.**—*Amer. J. clin. Path.*, xvii, 10, pp. 807–812, 1947.

By means of cross-agglutination and agglutinin-absorption reactions, a group antigen common to *Candida albicans*, *Saccharomyces cerevisiae*, and *Hansenula* (*Willia*) *anomala* has been demonstrated. Immune antisera for *C. albicans*, *C. parakrusei*, and *C. tropicalis* and for *S. cerevisiae* contain predominantly effective species-specific agglutinins, whereas the *H. anomala* antiserum contains predominantly effective group agglutinins. These findings confirm the work of Almon and Stovall (*J. infect. Dis.*, lv, pp. 12–25, 1934).

962. NORRIS (R. F.) & RAWSON (A. J.). **Occurrence of serum agglutinins for *Candida albicans* and *Saccharomyces cerevisiae* in a hospital population.**—*Amer. J. clin. Path.*, xvii, 10, pp. 813–819, 1947.

The agglutinins for *Candida albicans* were titrated in 469 sera from hospital patients submitted to the William Pepper Laboratory, Philadelphia, for routine serological tests. Agglutinin titres for *Saccharomyces cerevisiae* were determined simultaneously in 251 sera. The incidence of detectable agglutinins was higher for *C. albicans* than that reported by other workers, and contrary to previous statements, the number of women with demonstrable agglutinins was not significantly preponderant. There was a pronounced trend for the sera to contain no agglutinins for either species or to harbour them for both. Because of the high incidence of serum agglutinins for *C. albicans* in a hospital population, 300 or 64 per cent. giving titres of 1 : 5 or upwards and 216 (46) of 1 : 10 or upwards in this series, and on account of the known cross-agglutination reactions between this organism and other yeast-like fungi, the agglutination test should be used only as an adjunct in clinical diagnosis.

963. KENDALL (R. F.). **Undecylenic acid in the treatment of monilial vulvovaginitis.**—*Arch. Derm. Syph.*, N.Y., lv, 1, pp. 113–114, 1947.

Vulvovaginitis caused by *Monilia* [*Candida*] *albicans* in a 35-year-old woman was promptly relieved by treatment with 2.5 per cent. undecylenic acid and 10 per cent. zinc undecylenate in a base of equal parts of vanishing cream and lubricating jelly.

964. HOF (T.). **On the identity of *Torula cremoris* Hammer et Cordes with *Candida pseudotropicalis* (A. Cast.) Basgal.**—*Antonie van Leeuwenhoek J. Microbiol. Serol.*, ix, pp. 77–80, 2 figs., 1943. [Received May, 1947.]

In December, 1932, the Centraalbureau voor Schimmelcultures received a culture of *Torula cremoris* Hammer & Cordes from the National Collection of Type Cultures, London. Lodder considered that this yeast belonged to *Mycocandida*, but further investigation led to the conclusion that as its production of pseudomycelium was so scanty, it should be placed in *Torulopsis*.

Study by the author of his strain of the fungus showed pseudomycelium to be present, and he concludes that the fungus is identical with *C. pseudotropicalis*.

965. TORRES (C. M.), LEÃO (A. E. DE A.), & SELLES (J. F.). **Gastrite espontânea do Camondongo e cogumelos do gênero *Geotrichum* Link.** [Spontaneous gastritis of the Mouse and fungi of the genus *Geotrichum* Link.].—*Mem. Inst. Osw. Cruz*, xxxix, 1, pp. 97–103, 7 figs., 1943. [English summary. Received November, 1947.]

A species of *Geotrichum* was isolated on Sabouraud's medium from the stomachs of apparently healthy white mice fed on a normal diet at the Oswaldo Cruz Institute, Rio de Janeiro, Brazil. This observation is of practical importance in view of the extensive use of these animals in experimental studies on nutrition.

966. PANJA (G.). **A new oil medium for enhancement of growth of the *Malassezia* and subsequent study of serological reactions and pathogenicity.**—*Indian med. Gaz.*, lxxxi, 8, pp. 305–306, 1946.

The addition to the surface of an ordinary nutrient, dextrose, or preferably maltose agar of a fixed oil, e.g. coco-nut, olive, almond, or castor, was found to stimulate luxuriant growth of *Malassezia* spp., including *M. ovalis* [*Pityrosporum ovale*] and *M. furfur*. On a medium thus enriched, pin-point colonies of the fungi attain the diameter of a yeast in 24 to 48 hours, and mycelia develop in three days. A precipitating antigen was prepared by boiling the organisms in distilled water. A culture of *M. furfur* from an oil medium was innocuous to laboratory animals. The growth of *M. spp.* was inhibited by volatile oils, such as eucalyptus and mustard.

967. LECOMPTE (P. M.) & MEISSNER (W. A.). **Mucormycosis of the central nervous system associated with hemochromatosis.**—*Amer. J. Path.*, xxiii, 4, pp. 673–676, 1 pl., 1947.

A fungus found at autopsy in the brain of a 57-year-old patient at the U.S. Veterans' Hospital, West Roxbury, Massachusetts, consisted of non-septate, branching hyphae, 10 to 14 μ in diameter and up to 200 μ in length, with well-defined, refractile walls, the inner portion staining pale blue with haematoxylin. The hyphae showed a remarkable tendency to invade, infiltrate, and replace the walls of the blood vessels and to grow within their lumina. No culture was obtained, but Drs. J. E. Gregory and C. W. Emmons believe the organism to be a species of *Mucor*. There are apparently only four other cases of mucormycosis of the central nervous system on record, three from the United States and one from Germany. Common to all the American cases were uncontrolled diabetes with coma or mental confusion, evidence of orbital infection, and meningo-encephalitis.

968. NEGRONI (P.), FERNANDEZ (L. L.), & DAGLIO (C. A. N.). **A propósito de un caso de pie de Madura con granos negros. Revisión de los micetomas producidos por 'Madurella'.** [Concerning a case of Madura foot with black grains. Revision of the mycetomata produced by *Madurella*.].—*Rev. argent. Dermatosis*, xxxi, 2, pp. 192–205, 3 figs., 1947. [French and English summaries.]

Eight years ago Negroni and Tey isolated *Aspergillus chevalieri* from the black grains removed from a mycetoma of the right foot of a male patient at a Córdoba hospital. In their recent treatment of the same case at the Rawson Hospital, Buenos Aires, the authors isolated *Madurella ramiroi*. In this connexion a review is presented of the literature on the mycetomata caused by *M. spp.*

969. KULOWSKI (J.) & STOVALL (S.). **Maduromycosis of tibia in a native American.**—*J. Amer. med. Ass.*, cxxxv, 7, pp. 429-431, 3 figs., 1947.

The fungus isolated from a cyst on the left tibia of an eight-year-old boy at Hot Springs, New Mexico, was identified by Dr. J. T. Gammel as a species of *Madurella*. Of the 38 cases of alleged maduromycosis reported in the United States, only 11 were recognized by Downing and Conant [*Med. Mycol.*, No. 424] as culturally proved to be due to this cause. The present record may now be added to the authenticated category.

970. VAN DER SAR (A.) & HARTZ (P. H.). **Mycetoma pedis. Case report.**—*Amer. J. clin. Path.*, xvi, 2, pp. 129-138, 9 figs., 1946.

A case of mycetoma pedis, complicated by severe anaemia, in a 42-year-old male negro at the St. Elisabeth Hospital, Curaçao, Netherlands West Indies, is described. The disease persisted for over 18 years. Histological examination revealed true fungi, cultures of which, however, remained sterile.

971. BOEING (P. J.) & LAFFER (N. C.). **A preliminary report on a selective medium for the isolation of pathogenic fungi.**—Abs. in *J. Bact.*, liv, 1, pp. 90-91, 1947.

The information presented in this paper indicates that a medium containing heart infusion agar base with 6 per cent. human blood, 25 units of streptomycin, and 6 units of penicillin per ml. should prove satisfactory for the isolation of various pathogenic fungi from infectious material from a case of maduromycosis.

972. CALERO (C.). **Madura foot (mycetoma): first report from the Isthmus of Panama.**—*Arch. Derm. Syph.*, N.Y., lv, 6, pp. 761-771, 6 figs., 1947.

The existence of Madura foot (mycetoma) is reported for the first time from the Isthmus of Panama. Two cases occurred in farmers in the early forties, the causal organism in the first (for which only incomplete data are available) being referred to the family Streptomycetaceae Waksman & Henrici, and in the second (successfully treated by the author with sulphadiazine) to *Nocardia* [*Actinomyces*] *asteroides*.

973. MEYERDING (H. W.) & EVERT (J. A.). **Mycetoma or Madura foot. Report of cases including one case of maduramycosis of the hand.**—*Minn. Med.*, xxx, 4, pp. 407-409, 411, 1 fig., 1947.

Four cases of maduromycosis (one in a female) are described from the Mayo Clinic, Rochester, Minnesota, three involving the foot and one the hand. *Monosporium apiospermum* [*Allescheria boydii*] was isolated from one patient, in the second, attempts to culture the agent were unsuccessful, the third yielded an organism described as 'Madura fungus', and the fourth a *Madurella*.

974. DE MELLO (M. T.). **Considerações em torno da classificação dos gêneros 'Madurella', 'Indiella' e 'Rubromadurella'.** [Considerations on the classification of the genera *Madurella*, *Indiella*, and *Rubromadurella*.]—*Brasil-méd.*, lxi, 5-7, pp. 41-43, 1947.

The taxonomy of the genera *Madurella*, *Indiella*, and *Rubromadurella* is discussed and an analytical key presented for their classification based on the characters of the sclerotia.

975. BOASE (A. J.). **Rhinosporidiosis.**—*E. Afr. med. J.*, xxiv, 5, p. 199, 1947.

The fourth case of rhinosporidiosis (*Rhinosporidium*) [*seeberi*] from Africa and the second from Uganda is reported in a 25-year-old Muganda woman. The irritation of the inner canthus of the left eye appeared to be caused by a small, wart-like nodule attached by a thin pedicle to the caruncle, situated in

such a way that the lower punctum was displaced from the surface of the globe. The normal channel of entry is believed to be the conjunctiva and the lacrimal passage.

976. PÄTIÄLÄ (R.). **Untersuchungen über die Dermatophyten und die von ihnen hervorgerufenen Krankheiten in Finland.** [Studies on the dermatophytes and the diseases induced by them in Finland.]—137 pp., 38 figs. (14 col.), 6 graphs, 1 map, University of Helsinki, 1945. [Received August, 1947.]

This valuable, well-produced treatise on the dermatophytes and their associated diseases in Finland is based on the author's experience since 1940 at the Serobacteriological Institute and Dermatological Clinic of the University of Helsinki, and comprises an introductory survey of the history of the subject and previous researches on it (Chapter I), personal studies (II), personal cases (III), discussion of clinical material (IV), the geographical distribution of the dermatophytes (V), a summary (VI), and a bibliography of 140 titles.

977. MARRE (I. R.). **Common fungus infections of the skin.**—*Post-Grad. med. J.*, xxiii, 259, pp. 255–259, 1947.

Three groups of fungi are considered in relation to common superficial dermatomycoses, namely, the agents of ringworm (*Microsporum*, *Trichophyton*, *Achorion*, and *Epidermophyton* spp.), *Monilia* (usually *M. [Candida] albicans*), often responsible for serious generalized and systemic infections, and two species of *Microsporon*, *M. [Malassezia] furfur* and *Microsporon minutissimum* [*Actinomyces minutissimus*], causing pityriasis versicolor and erythrasma, respectively. The various infections are described, with indications for their diagnosis and therapy, under the several regions of the body involved.

978. STRAUSS (M. J.). **Erasmus Wilson on ringworm.**—*Yale J. Biol. Med.*, xix, 2, pp. 141–147, 1 pl., 1 fig., 1946.

The Presidential address before the New Haven (Connecticut) Medical Association, presented on 21st January, 1946, commemorated the centenary of the publication of Erasmus Wilson's 'Practical and Theoretical Treatise on the Diagnosis, Pathology, and Treatment of Diseases of the Skin' by a review and discussion of the book, preceded by a brief outline of the author's career.

979. BERNHARDT (E.). **Dermatophytosis of the face caused by *Trichophyton camerounense*.**—*Arch. Derm. Syph.*, N.Y., lv, 3, pp. 337–341, 1 fig., 1947.

Previous to the present case of facial dermatophytosis caused by *Trichophyton camerounense* or *Favotrichophyton camerounense* (Ota & Galliard) Dodge in a 14-year-old male patient at the Boston City Hospital, there was only one record of the fungus in the lesions of a bull transported from the Cameroons to Paris for studies on tropical piroplasmoses (*Ann. Parasit. hum. comp.*, iv, pp. 4–21, 1926). The patient's condition proved amenable to therapy with an ointment containing 2 per cent. yellow mercuric oxide in aquaphor. Inoculation experiments on rabbits and guinea-pigs gave positive results.

980. PÄTIÄLÄ (R.). **Sur un cas de trichophytie produit par le *Trichophyton sulphureum* en Finlande.** [On a case of trichophytosis produced by *Trichophyton sulphureum* in Finland.]—*Ann. Parasit. hum. comp.* xxi, 5–6, pp. 336–337, 1946.

From a squamous lesion with a blistered edge on the back of a female patient aged 20 years suffering from circinate herpes in Helsinki the author isolated *Trichophyton sulphureum*, a new record for Finland. Inoculation of a guinea-pig gave rise to a squamous area in a fortnight, and after three weeks a retro-culture could still be obtained.

981. SAGHER (F.). **The laboratory aspect of fungous diseases of the skin and hair.**—*Acta med. orient.*, vi, 3, pp. 68–78, 6 figs., 1947.

During the period from 1939 to 1946, cultures were set up on maltose agar from the skin of 1,224 cases of dermatological disorders at the Rothschild-Hadassah University Hospital, Jerusalem, of which 851 were already positive for fungal growth on microscopic examination. The plates yielded a total of 540 pathogenic fungi (63·5 per cent.). *Trichophyton violaceum* was the principal agent of tinea capitis, occurring in 56·2 per cent. of all cases, the corresponding figures for *T. glabrum*, *T. acuminatum*, *T. crateriforme*, *T. cerebriforme*, *T. gypsum*, *T. persicolor*, and *T. niveum* being 3·9, 1·5, 0·6, 0·8, 3·7, 0·2, and 0·2, respectively. *A[chorion] schoenleini* was the sole organism associated with favus, representing 12·5 per cent. of the total. Only one case (0·2 per cent.) of microsporiosis (*Microsporum audouini*) was encountered, a matter of considerable interest in view of its prevalence in other countries. *T. gypsum* and *E[pidermophyton: T.] interdigitale* were the principal agents of dermatophytoses (5·9 and 7·8 per cent., respectively), mostly involving the feet and inguinal region. Of 21 cultures from cases of generalized tinea cruris, 19 yielded *T. purpureum*. A positive culture was obtained from a case of maduromycosis of the skin and bones (reported elsewhere).

982. CATANEI (A.). **Sur les formes cliniques et les champignons des teignes d'enfants des écoles d'Alger.** [On the clinical forms and the fungi of ringworms on school-children of Algiers.]—*Arch. Inst. Pasteur Algér.*, xxv, 1, pp. 1–16, 1947.

Since 1927 the author has been engaged on an analytical study of the clinical forms and causal organisms of juvenile ringworms at Algiers, the subjects comprising 871 children (787 native and 84 European). Trichophytosis was present in 88 per cent. of the former group, favus [*Achorion schoenleini*] in 9·2, and *Microsporum canis* in 2·5. The *Trichophyton* species involved were *T. violaceum* (23·6 per cent.), *T. glabrum* (7·5), and in nine cases the following, all rare in Algeria: *T. acuminatum* (3), *T. fumatum* (4), *T. regulare*, and *T. plicatile* (one each). Among the Europeans, 66·6 per cent. suffered from trichophytosis, 10·7 per cent. from favus, and 22·6 per cent. from microsporiosis. *T. violaceum* was responsible for 10·7 per cent. of the cases of trichophytosis, *T. glabrum* for 66 per cent., and *T. acuminatum*, *T. fumatum*, *T. crateriforme*, *T. umbilicatum*, and *T. plicatile* for 23 per cent. *M. canis* was the agent in 17 out of the 19 cases of microsporiosis and *M. audouini* in the other two.

The clinical forms of the three types of ringworm are described, and the difficulties of diagnosis are discussed.

983. CATANEI (A.). **Sur un premier cas algérien de teigne cutanée à *Trichophyton rubrum*.** [On a first Algerian case of cutaneous ringworm due to *Trichophyton rubrum*.]—*Arch. Inst. Pasteur Algér.*, xxv, 2, p. 89, 1947.

Trichophyton rubrum was isolated on dextrose agar from the squamæ of circinate plaques, 2 to 3·5 cm. in diameter, on the abdomen and back of a 14-year-old European girl, this being the first record of the fungus for Algeria. Two guinea-pigs inoculated with the pathogen developed a ringworm of the ecto-endothrix type. The patient's lesions were cured by applications of iodized alcohol.

984. SEGRETAINE (G.). **Sur un *Trichophyton rubrum* d'origine africaine.** [On a *Trichophyton rubrum* of African origin.]—*Ann. Inst. Pasteur*, lxxiii, 4, pp. 395–397, 2 figs., 1947.

The cultural and morphological characters of a fungus isolated at the Institut Pasteur, Paris, from a male patient with an epidermomycosis of the 'eczema

marginatum' type and onychomycosis, contracted over five years earlier in the Cameroons, permitted its identification as *Trichophyton rubrum*.

985. CARRICK (L.). **The epidemiology of tinea capitis in Detroit school children.**—*J. Mich. med. Soc.*, xlv, 3, pp. 347-352, 406, 1 map, 1946.

In a city-wide survey conducted among elementary schoolchildren in Detroit, of 3,565 children selected at random 96 or 2·7 per cent. showed evidence of tinea capitis, all positive cases being due to *Microsporum audouini*. Most infections occurred between the ages of six and ten, six boys were infected for each girl, and the percentage of infection was higher among coloured than white children. In males, the hairline was mostly involved, whereas most of the females showed vertex involvement.

986. ABSHIER (A. B.). **Common fungous infections.**—*J. Okla. med. Ass.*, xl, 8, pp. 334-337, 1947.

Directions are given for the differential diagnosis and therapy of some well-known fungal infections encountered in every-day practice in Oklahoma, e.g., dermatophytoses of the feet and hands, various types of ringworm, including tinea capitis (*Microsporum audouini* and *M. lanosum*), tinea versicolor (*M. [Malassezia] furfur*), and the several clinical manifestations of *Monilia [Candida] albicans*.

987. HAZEN (ELIZABETH L.). ***Microsporum audouini*: the effect of yeast extract, thiamine, pyridoxine, and *Bacillus weidmaniensis* on the colony characteristics and macroconidial formation.**—*Mycologia*, xxxix, 2, pp. 200-209, 4 figs., 1947.

Yeast extract (5 mg. per ml.) added to honey agar (60 gm. commercial honey, 10 gm. peptone, 20 gm. agar, and 1,000 ml. distilled water) caused a marked increase in the vegetative growth of *Microsporum audouini*, the agent of tinea capitis. Its stimulatory effect on macroconidial production was comparable to that of *Bacillus weidmaniensis* [*Med. Mycol.*, No. 69]. The substitution of pyridoxine for yeast extract made little or no difference to the extent of macroscopic growth but increased macroconidial development. The fungus did not respond similarly to the addition of thiamine, with or without pyridoxine. *M. audouini* appears to be deficient in certain factors essential to its profuse growth and macroconidial production, and the substances in question, which are probably identical, are present in yeast extract and evolved by *B. weidmaniensis*.

988. KEDDIE (J. A. G.). **Ringworm of the scalp in children. Its causation, detection, and treatment, and a report on an outbreak.**—*Hlth Bull. Scotl.*, v, 4, pp. 66-68, 1947.

Following a general account of the etiology, clinical features, diagnosis, and therapy of tinea capitis, full particulars are given of an outbreak at Bathgate, West Lothian, in 1946, involving 351 children, 312 boys and 39 girls (89 and 11 per cent., respectively), and of the prompt and successful measures adopted for its control. The causal organism was identified as *Microsporum audouini*.

989. MONTGOMERY (R. M.). **An aid for electrolysis under filtered ultra-violet in tinea capitis.**—*J. invest. Derm.*, ix, 1, p. 1, 1947.

A method is described facilitating the insertion into the follicle of a hair infected by tinea capitis [mostly caused by *Microsporum audouini*] of the electrolysis needle, which is not easily seen under filtered ultra-violet light. This inconvenience may be remedied by coating the needle with a golden fluorescent lacquer, the formula recommended consisting of eosin 0·1, shellac 1·5, 95 per cent. alcohol 5. The procedure is helpful in early cases and in those

following epilation, when only a few hairs are involved, as well as for application to patients approaching the age of puberty, in whom epilation is contra-indicated.

990. HAZEN (H. H.). **Results of repeated epilation with roentgen rays in tinea tonsurans.**—*Arch. Derm. Syph., N.Y.*, lvi, 4, pp. 539–540, 1947.

Five negro boys, 8 to 11 years old, at a Washington (D.C.) orphanage received three roentgen-ray epilations within 15 months for the extirpation of the human type of tinea tonsurans [*Microsporum audouini*]. After the third treatment the regrowth of the hair was slow and scanty, and two years later a re-examination of three of the boys revealed no improvement. Two standard roentgen-ray epilations would appear to be perfectly safe, but judging from these observations a third should in no case be attempted.

991. SCHWARTZ (L.). **Public health aspects of the treatment of tinea capitis.**—*N. Y. St. J. Med.*, xlvii, 16, pp. 1782–1785, 1947.

In this paper, presented at the 141st Annual Meeting of the Medical Society of the State of New York on 7th May, 1947, an account is given of the measures applied by the United States Public Health Service in 1944 to the control of an epidemic of tinea capitis at Hagerstown, Maryland, involving some 600 out of 7,000 schoolchildren and caused in 98 per cent. of the cases by *Microsporum audouini* [*Med. Mycol.*, No. 795].

992. STRICKLER (A.). **The treatment of tinea capitis with special iodine and dilute acetic acid. (Report of results in a larger series of patients.)**—*Urol. cutan. Rev.*, li, 5, pp. 264–267, 1947.

A method of treatment of tinea capitis (*Microsporum audouini*) is proposed, consisting in the application to the clipped scalp of 3 per cent. acetic acid, followed by the use of an electric bulb (150 to 200 watt), and friction with a 'special' iodine mixture [directions for the preparation of which are given]. This procedure resulted in 124 cures in three series of patients, totalling 185 (68 per cent.), at the Skin and Cancer Hospital, Philadelphia.

993. STEVES (R. J.) & LYNCH (F. W.). **Ringworm of the scalp. Report of the present epidemic.**—*J. Amer. med. Ass.*, cxxxiii, 5, pp. 306–309, 3 maps, 1947.

Information elicited by questionnaires indicates that an epidemic form of ringworm of the scalp, caused almost exclusively by *Microsporum audouini*, has appeared in most sections of the United States. In Minnesota, where the disease was previously unknown, a recent epidemic involved 747 children. In a selected series of cases, 25 per cent. of the children were cured by means of manual epilation, while the same method, followed by supplementary treatment with X-rays, was successful in 80 per cent. of the patients. A footnote states that on 31st December, 1946, the total number of cases in St. Paul had reached 834, of which only three were caused by *M. lanosum*.

994. MURPHY (J. A.). **Ringworm of the scalp.**—*Med. Ann. D.C.*, xv, 2, pp. 64–66, 97, 1946.

Ringworm of the scalp (*Microsporum audouini* and *M. lanosum*) is stated to be prevalent in Washington, where 1,018 cases in children under 16 were investigated between the opening of schools and 28th November, 1945, when this paper was read before a meeting of the Medical Society of the District of Columbia. The following aspects of the subject are discussed: method of spread, use of filtered ultra-violet rays for diagnosis, clinical symptoms, prevention, and treatment.

995. EICHENLAUB (F. J.) & OSBOURN (R. A.). **Ringworm of the scalp.**—*Med. Ann. D.C.*, xv, 12, pp. 596–600, 1946.

A brief review of the outstanding features of the etiology, diagnosis, differential diagnosis, and therapy of ringworm of the scalp is presented. Of 100 consecutive cases treated by total X-ray epilation between July, 1943, and September, 1946 (86 boys and 14 girls from 2½ to 14 years of age), 99 were cured. Local medication was apparently successful in 8 out of 28 cases (20 boys and 8 girls from 20 months to 8 years). The most effective local treatment was found to consist of T.C.A.P. [No. 1007, below] in intraderm alternating with sopronol solution. The average times required to effect a cure by epilation and local therapy were six weeks and six months, respectively.

996. DENNIE (C. C.) & MORGAN (D. B.). **Use of the purple X bulb in diagnosis of fungous diseases of the scalp.**—*Arch. Derm. Syph.*, N.Y., lv, 3, pp. 396–397, 1947.

A suitable substitute has been found for the ordinary Wood glass filter, consisting of a 250-watt light bulb with nickel and cobalt incorporated in the glass wall of the tube. Known as No. 250, A-21-60 natural red-purple, Purple X bulb, it is supplied by the General Electric Company at a cost of \$1.25. *Microsporum* infections of the scalp stand out vividly as a greenish phosphorescence on illumination with the new bulb.

997. RAY (L. F.). **Ringworm of scalp in Pacific Northwest.**—*Northw. Med.*, xlvi, 3, pp. 214–216, 1947.

As in other regions of the United States, ringworm of the scalp has become increasingly prevalent of recent years in the Pacific Northwest, where the human type, caused by *Microsporum audouini*, appears to be new. It was present in 15 out of 35 specimens of schoolchildren's hair (43 per cent.) examined between January and August, 1946, the corresponding numbers for *M. lanosum* and *Trichophyton purpureum* being 19 and 1, respectively. During the period from July, 1941 to June, 1942, when 20 samples were inspected, *M. lanosum* was detected in 19 and *T. purpureum* in one. Directions are given for diagnosis and treatment.

998. ROTHMAN (S.), SMILJANIC (A.), SHAPIRO (A. L.), & WEITKAMP (A. W.). **The spontaneous cure of tinea capitis in puberty.**—*J. invest. Derm.*, viii, 2, pp. 81–98, 1947.

With the onset of puberty the sebaceous glands of the scalp begin to secrete a sebum containing increased concentrations of low-boiling saturated fatty acids with a selective fungistatic and fungicidal action on *Microsporum audouini*, the agent of tinea capitis [*Med. Mycol.*, No. 791]. Highly active normal aliphatic monobasic acids with odd numbers of carbon atoms, including pelargonic and tridecanoic acids, have been isolated from adult hair fat. This substance does not kill the fungus spores within the hair but prevents infection of the new hair replacing the old after shedding. No rapid cure, therefore, can be effected by the artificial simulation of the pubertal changes in the sebaceous glands, but it should be practicable to devise successful prophylactic measures against scalp infection by *M. audouini* on this basis.

999. HELLIER (F. F.). **The treatment of ringworm.**—*Practitioner*, clviii, 945, pp. 253–254, 1947.

Directions are given for the therapy of ringworm according to the site of the body involved, viz., smooth skin, scalp (mostly *M[icrosporum] audouini*), beard, foot, and nail.

1000. ROBERTS (T. E.). **The varieties of fungi causing ringworm of the scalp.**—*Med. Off.*, lxxvii, 6, p. 65, 1947.

Ringworm of the scalp in the Portsmouth district appears from a recent survey to be almost exclusively due to *Microsporum felineum* or *M. lanosum*, infection by *M. audouini* being rare. The disease is stated to be virtually confined to children, who contract it from each other, as well as from cats and dogs; to be increasing in prevalence; and to be probably more contagious than the form caused by *M. audouini*. Clinical features of the 'animal', as opposed to the 'human', ringworm include more rapid development and a more acute course of briefer duration; frequent involvement of the skin of face, neck, &c.; occasional infection of the scalp without the hair; more pronounced local reactions and more numerous and earlier multiple lesions; and readier response to application of ointments, epilation by X-rays being seldom required.

1001. BURKHART (R. J.). **Tinea capitis.**—*Arch. Derm. Syph.*, N.Y., lvi, 1, pp. 111-112, 1947.

Most of the cases of tinea capitis in pre-adolescent juveniles in the San José district of California are caused by *Microsporum lanosum* and generally react favourably to local therapy. Good results have also been obtained by a supplementary treatment consisting in frequent shampooing of the scalp with the sulphur foam cloths supplied by the Wyeth Company.

1002. SHAW (C.). **Tinea capitis in southeastern Tennessee.**—*Arch. Derm. Syph.*, N.Y., lv, 2, pp. 258-259, 1947.

Of 22 patients, 15 boys and 7 girls from two to nine years old (including three negroes), with tinea capitis examined at Chattanooga, Tennessee, between July, 1942, and February, 1946, 21 were infected by *Microsporum lanosum* and one by *Trichophyton crateriforme*. Local applications of 5 per cent. ammoniated mercury ointment were generally effective in the relief of the condition.

1003. FRITZEMEIER (W. H.). **The management of tinea capitis.**—*J. Kans. med. Soc.*, xlviii, 7, pp. 317-319, 1947.

At Wichita, Kansas, the author observed 52 cases of tinea capitis over a period of 18 months. Of the 46 positive for fungi in cultures on Sabouraud's media, 42 (91.2 per cent.) yielded *Microsporum lanosum*, 3 (6.4) *Trichophyton gypsum*, and 1 (2.2) *T. purpureum*. The prevalence of the animal type of ringworm suggests contact with pets as the predominant source of infection. In addition to cultural methods, Wood's filter examination and microscopic study of the hair should be used as aids to diagnosis. Total epilation by X-rays is regarded as the treatment of choice in the majority of cases.

1004. DOLCE (F. A.) & NICKERSON (W. J.). **Treatment of mycotic infections by inhibiting respiration of dermatophytes.**—*Arch. Derm. Syph.*, N.Y., lv, 3, pp. 379-384, 1947.

Treatment with a 1 per cent. alcoholic solution of zinc chloride was applied to a group of 45 patients with superficial mycotic infections at a United States Army post. There was no response in the two cases harbouring *Microsporum audouini* or *Candida albicans*, while the cures among those attacked by *Trichophyton gypsum*, *T. rubrum*, and *Epidermophyton floccosum* numbered 3 out of 31, 1 out of 8, and 2 out of 2, respectively.

1005. SAUTET (J.), RANQUE (J.), & VUILLET (J.). **Apparition soudaine de macroconidies chez un *Sabouraudites gypseus* en pleine transformation pléomorphe.** [Sudden appearance of macroconidia in a strain of *Sabouraudites gypseus* undergoing pleomorphic change].—*Ann. Parasit. hum. comp.*, xxi, 5-6, pp. 331-335, 9 figs., 1946.

A strain of *Sabouraudites gypseus* [*Trichophyton gypseum*], which showed signs of becoming completely pleomorphic after transference at monthly intervals on a conservation medium, was grown on 20 gm. agar, 20 gm. peptone, and 5 gm. sodium chloride per l. meat broth, and then again on Sabouraud's conservation medium, when numerous pluriseptate macroconidia suddenly appeared. Variable in shape, they were regularly or irregularly septate or divided longitudinally into several branches, these characters persisting during five transfers with variations in the abundance and shape of the macroconidia. Inoculations were made into two guinea-pigs on 8th March, 1946. One gave a few spores and died 10 days after the inoculation. A retroculture from its hairs again showed a pleomorphic appearance.

1006. STUBENBORD (W. D.). ***Tinea capitis*.**—*Nav. med. Bull., Wash.*, xlvii, 1, pp. 159-162, 2 figs., 1947.

A case of *tinea capitis* (*Trichophyton gypseum*) in a 12-year-old male Chamorro native [of Guam] is reported. Therapeutic measures included the intramuscular injection of a total of 100,000 Oxford units of penicillin, oral administration of potassium iodide, wet dressings of potassium permanganate (1 in 4,000), and daily applications to the scalp of tincture of iodine.

1007. FOLEY (E. J.), HERRMANN (F.), & LEE (S. W.). **The effects of pH on the antifungal activity of fatty acids and other agents.**—*J. invest. Derm.*, viii, 1, pp. 1-3, 1947.

Under the experimental conditions described, six fatty acids, viz., propionic, heptylic, caprylic, pelargonic, capric, and undecylenic, and trimethyl cetyl-ammonium pentachlorophenate (TCAP), exerted a stronger fungistatic action on *Trichophyton gypseum* at pH 5 than at 5.6, 6, 7, or 8.

1008. FOLEY (E. J.), HERRMANN (F.), & LEE (S. W.). **The influence of experimental conditions on the results of in vitro tests for antifungal action (with special reference to the effect of maintaining solubility of the agents.)**—*J. invest. Derm.*, viii, 1, pp. 5-7, 1947.

The results of the experiments described indicate that the growth-inhibitory activity of undecylenic acid against *Trichophyton gypseum* is dependent on pH and solubility. Higher inhibitory values were again secured at pH 5 [see preceding entry], while the fungistatic activity of the compound was further enhanced by the use of liquids tending to maintain or increase solubility, i.e., propylene glycol, alcohol, and aqueous triethanolamine, in place of water.

1009. GHOSH (L. M.), DEY (N. C.), & PANJA (D.). **Studies of ringworm. Part IV. Incidence of *Trichophyton gypseum* in India.**—*Indian med. Gaz.*, lxxxii, 2, pp. 73-75, 1 pl., 1947.

The occurrence of *Trichophyton gypseum* is reported for the first time from India, the observations being based on four cases of hair infection, samples of hair from Gurkha troops affected by ringworm of the scalp, two cases of skin infection, and one involving the nails. The cultural and morphological characters of the fungus are described. The pleomorphic changes coinciding with advancing age resulted in the development of a velvety or fluffy type of growth in place of the original granular. It is proposed to include the many variants

of *T. gypsum* mentioned in the text-books, e.g., *T. asteroides*, *T. radiolatum*, *T. granulorum*, *T. lacticolor*, *T. farinulentum*, and *T. persicolor*, under the mother species.

1010. AJELLO (L.), KEENEY (E. L.), & BROYLES (E. N.). **Observations on the incidence of tinea pedis in a group of men entering military life.**—*Bull. Johns Hopkins Hosp.*, lxxvii, 6, pp. 440-447, 1945.

Of 871 young men examined for tinea pedis in the course of their qualifying physical examination for the United States Naval Academy, Annapolis, Maryland, 522 (59.9 per cent.) presented clinical evidence of infection. Fungal elements were revealed by microscopic inspection in scrapings from 148 (28.4 per cent.) of the group showing clinical symptoms and in six (1.7 per cent.) of the remainder. *Trichophyton mentagrophytes* and *T. rubrum* were the most prevalent causal organisms, while *Epidermophyton floccosum* and *Candida albicans* were isolated in a minority of cases.

1011. ROSENBAUM (M. J.). **Contribution to the pathology of epidermophytosis.**—*Acta med. orient.*, v, 5, pp. 162-164, 1946.

A case of incipient tinea infection, probably caused by *Epidermophyton Kaufmann-Wolff*, in a 14-year-old girl at Haifa, Palestine, is reported. Vesicles developed on the right hand as a sequel to irritation by stinging-nettles and spread up to the armpit. A rapid cure was effected by the application of a dressing soaked in an alcoholic solution of 2 per cent. salicylic acid to the wound and of antiphlogistine to the cubital region. It is assumed that the fungus was already present as a saprophyte either on the nettle or on the patient's skin when the trauma was inflicted which permitted its ingress.

1012. SHAFFER (B.). **Differential considerations involved in common eruptions of the feet.**—*Penn. med. J.*, 1, 2, pp. 145-147, 1947.

A group of prevalent but diagnostically confusing eruptions of the feet is discussed, listing briefly their cardinal differentiating features and emphasizing the complex etiology of many such conditions. Dermatophytosis (*Trichophyton gypsum*, *T. purpureum*, and *Epidermophyton inguinale* [*E. floccosum*]), the most common form of dermatitis of the feet, is closely simulated by several other diseases from which it must be clearly distinguished for therapeutic purposes.

1013. HOPKINS (J. G.), HILLEGAS (A. B.), LEDIN (R. B.), REBELL (G. C.), & CAMP (E.). **Dermatophytosis at an infantry post. Incidence and characteristics of infection by three species of fungi.**—*J. invest. Derm.*, viii, 6, pp. 291-316, 2 figs., 5 graphs, 1947.

Inspections of infantry covering the period from September, 1942 to September, 1945, at Fort Benning, Georgia, disclosed typical dermatophytosis of the feet in 24 per cent., while the existence of the condition was suspected in a further 57 per cent. Fungi were demonstrated in 53 per cent. of the scrapings examined microscopically. *Trichophyton gypsum*, *T. purpureum*, and *Epidermophyton floccosum* were cultured from 47, 36, and 17 per cent., respectively, of the lesions, the incidence of *T. purpureum* being relatively higher in the summer. Mixed infections were prevalent. The nails were involved in 47 per cent. of the recurrent cases, 70 per cent. of which yielded the same species in both attacks. Dermatophytosis of the feet caused by the two *T. spp.* showed no constant difference in severity, types of lesions, response to treatment, or frequency of relapse, but *E. floccosum* induced a less persistent infection. The groin and trunk lesions due to *T. purpureum* were more diffuse and scaling, less inflammatory, more refractory to therapy, and more prone to relapse than

those caused by *E. floccosum*. Most of the available evidence seems to point to activation of a latent infection, rather than exogenous inoculation, as the cause of dermatophytosis of the feet.

1014. DOSTROVSKY (A.) & RAUBITSCHKE (F.). **In vitro studies on a reciprocal growth inhibition exhibited by certain dermatophytes.**—*Dermatologica*, xciv, 4, pp. 231–236, 4 figs., 1947. [German and French summaries.]

In experiments at the Rothschild–Hadassah University Hospital, Jerusalem, involving the joint growth of various dermatophytes on a dextrose peptone agar medium in Petri dishes, a reciprocally inhibitory effect on growth was exerted by *A[chorion] schoenleini* and *T[richophyton] violaceum*. *E[pidermophyton] inguinale* [*E. floccosum*] in the course of nine days inhibited the growth of all the other species including, besides the foregoing, *T. gypseum*, *T. interdigitale*, *T. purpureum*, and *Candida albicans*: after a short time, however, the more rapidly growing organism overcomes the obstacle and eventually overgrows the slower one. There was no mutual antagonism between the rapidly growing *T. gypseum* and *T. interdigitale*, or between either of these and the slower-growing species (except *E. floccosum*), while reciprocal effects were also absent in tests with *T. violaceum* or *A. schoenleini* against *T. purpureum* or *C. albicans*. An attempt is made to explain the results in the light of recent antibiotic studies.

1015. REISS (F.). **The effect of hormones on the growth of *Trichophyton purpureum* and *Trichophyton gypseum*. The effect of sex hormones on experimental *Trichophyton purpureum* infection in Rabbits.**—*J. invest. Derm.*, viii, 5, pp. 245–253, 2 figs., 1947.

Methyl testosterone was found to exert a demonstrable fungistatic effect on the *in vitro* growth of *Trichophyton gypseum* and *T. purpureum* which was not altered by the addition of alpha estradiol or desoxycorticosterone acetate to the culture media. When hormones were in contact in a suspension of *T. gypseum* for one to two hours before inoculation on the media, the growth of the fungus was more retarded by ethynil estradiol and diethyl stilbestrol than by alpha estradiol or methyl testosterone.

Topical applications of methyl testosterone in an ointment base produced a curative effect on experimental infection by *T. purpureum* in castrated rabbits, which also responded fairly well to similar treatment with alpha estradiol. Neither hormone was of any therapeutic value when given by injection.

1016. WHITTLE (C. H.). **Atypical favus : with notes on three cases and a review of cases published in the last fifteen years.**—*Brit. J. Derm. Syph.*, lix, 6, pp. 199–204, 1947.

Three cases of atypical favus in children (two of whom were in close contact) are described from the author's routine practice at Cambridge in 1943–4. No scutula or broken hairs were seen, while alopecia and atrophy were absent or slight except in one patient. A review of the nine cases recorded in England during the last 15 years shows that scutula were present in only one case, broken hairs in four, alopecia and atrophy in seven and six, respectively, and fluorescence in eight. *Achorion schoenleini* was recovered in culture from all the patients. Infectivity appears to be low, spread through contact having been reported only in one other case besides that mentioned above. Three more cases of atypical favus have been shown in London since this paper was submitted for publication, atrophy being present in all, but no scutula.

1017. SCHWARTZ (L.). **Progress in fungous disease therapy.**—*J. Lancet*, N.S., lxvii, 2, pp. 56–59, 1947.

This is a review, preceded by a brief historical note, of 25 contributions to the literature on the therapy of *tinea pedis* and *tinea capitis*.

1018. EPSTEIN (E.). **Dermatologic practice in a station hospital in southern California: a comparison with private practice.**—*Arch. Derm. Syph.*, N.Y., lii, 1, pp. 21–25, 1945.

Dermatophytoses were found to be more prevalent among the 1,280 patients seen in a military hospital in southern California than in the same number treated in civilian practice (16·8 as compared with 7·5 per cent.).

1019. SULZBERGER (M. B.) & KANOF (A.). **Undecylenic and propionic acids in the prevention and treatment of dermatophytosis.**—*Arch. Derm. Syph.*, N.Y., lv, 3, pp. 391–395, 1947.

In a clinical study on 70 men at the United States Naval Disciplinary Barracks, Hart's Island, New York, in the summer of 1945, the prophylactic use of undecylenic acid-undecylenate powder was found to reduce the incidence of dermatophytosis of the feet by 85 per cent. This preparation was followed in descending order of efficacy by diodoquin, 5 per cent. talcum powder, vioform, 1 to 3 per cent. in talcum powder, calcium-zinc propionate powder, foot powder, U.S.N., boric-acid-salicylic powder, talcum powder, and thiourea, 5 per cent. in talcum powder.

1020. BARAIL (L. C.). **Testing of fungicidal materials against pathogenic fungi.**—*J. Bact.*, liii, 1, p. 127, 1947.

By using a recontamination method, with fresh cultures of *Trichophyton*, *Microsporum*, *Achorion*, *Epidermophyton*, or *Monilia* [*Candida*] *albicans*, on such materials as animal and vegetable fibres, leather, and such like it was found that very few of more than 300 fungicides tested were satisfactory. The best results for harmlessness to human skin as well as efficiency were a few long-chain organic mercury compounds.

1021. BERESTON (E. S.). **Propylene glycol dipropionate (a new fungicide). Preliminary report.**—*J. invest. Derm.*, viii, 5, pp. 227–228, 1947.

Out of a total of 340 cases of clinical dermatophytosis of the feet at two children's summer camps in Maryland, cultures were made on Sabouraud's media in 284, of which 171 yielded pathogenic organisms, viz., 88 *T[richophyton] gypseum*, 14 *T. purpureum*, 6 *T. crateriforme*, 3 *T. violaceum*, 26 *E[pidermophyton: T.] interdigitale*, and 34 *M[onilia: Candida] albicans*. Following one to three weeks' treatment with 100 per cent. pure concentrated propylene glycol dipropionate (two applications daily), 97 per cent. of the 85 acute, 93 per cent. of the 132 subacute, and 8 per cent. of the 123 chronic cases were completely cured in an average period of nine days.

In a series of 49 superficial cutaneous dermatomycoses at a University skin clinic, cultures were made in 43, of which 21 yielded the following fungi: 7 *T. gypseum*, 2 *T. purpureum*, 5 *E. inguinale* [*E. floccosum*], and 7 *T. interdigitale*. All the ten patients with *tinea cruris* recovered in three to five weeks, the 12 with *tinea circinata* in 10 days to three weeks, and 19 out of 21 with dermatophytosis of the hands and feet in three to four weeks.

1022. GATÉ (J.), COUDERT (J.), & CHMEL (L.). **Fréquence actuelle des dermatomycoses des animaux transmises à l'Homme.** [Present-day incidence of animal dermatomycoses transmitted to Man.]—*J. Méd. Lyon*, xxviii, 661, pp. 541–544, 1947.

In a series of 25 cases of ringworm, nearly all among shepherds and stock-breeders, investigated at a Lyons clinic in 1946–7, 19 yielded *Ctenomyces* [*Trichophyton*] *mentagrophytes* in pure culture and two *T. album*. Cattle were implicated as the source of infection in the majority of the subjects.

1023. PÄTILÄÄ (R.). **Allylsénérol (isosulfocyanate d'allyle) antibiotique pour les dermatophytes.** [Allylsenerol (allyl isosulphocyanate) an antibiotic for dermatophytes.]—*Ann. Parasit. hum. comp.*, xxi, 5–6, pp. 338–341, 1946.

On glucose agar (2 per cent.) synthetic allylsenerol (allyl isosulphocyanate) exercised by diffusion a markedly retarding effect on the growth of *Sabouraudites lanosus* [*Microsporum lanosum*], *S. gallinae* [*Trichophyton megnini*], *Ctenomyces asteroides* [*T. mentagrophytes*], *T. rosaceum*, and *T. album* at dilutions of 1 in 10 to 1 in 100,000. Experimental infection of a guinea-pig with *T. mentagrophytes* was cured in three days by treatment with allylsenerol at 1 in 100.

1024. RANQUE (J.). **Actions réciproques du Staphylocoque doré et du Microsporum felineum d'une part, du bacille pyocyanique et Microsporum felineum d'autre part, en culture sur milieux solides.** [Reciprocal actions of *Staphylococcus aureus* and *Microsporum felineum* on the one hand, and of *Pseudomonas pyocyanea* and *Microsporum felineum* on the other, in culture on solid media.]—*C.R. Soc. Biol., Paris*, cxl, 17–18, pp. 654–655, 1946.

The only interactions between cultures of *Microsporum felineum* and *Staphylococcus aureus* growing in juxtaposition on Sabouraud's agar were of a purely mechanical order, whereas *Bacillus pyocyaneus* exerted a definitely toxic action on the fungus, inhibiting its growth at 20° C. and injuring it at 37°.

1025. FELTON (L. C.) & McLAUGHLIN (C. B.). **Some highly halogenated phenolic ethers as fungistatic compounds.**—*J. organ. Chem.*, xii, 2, pp. 298–302, 1947.

Six classes of ethers of highly halogenated phenols, including 12 new compounds, were prepared and tested for fungistatic activity in respect of *Trichophyton mentagrophytes* strain 640. The phenoxyethanols showed definite promise for the end in view.

1026. KLEMME (DOROTHEA E.) & BALDWIN (AGNES C.). **Effectiveness of fungicidal chemicals in preventing the growth of Trichophyton interdigitale and Epidermophyton floccosum in shoe leather.**—*Circ. U.S. Dep. Agric.* 758, 18 pp., 1947. [Photolithographed.]

Of 81 chemicals and combinations of substances tested for the inhibition of growth of *Trichophyton interdigitale* and *Epidermophyton floccosum* on chrome-retanned leather, eight were graded as good to excellent for the end in view, viz., 2 per cent. phenylmercuri-9-acetoxy-12-octadecanoic acid, 0.15 and 0.25 per cent. sodium ethylmercurithiosalicylate, 2 per cent. 4, 2, 5-trichlorophenol, 5 per cent. 2, 3, 4, 6-tetrachlorophenol, 3 and 5 per cent. paranitrophenol, 6 per cent. parachlorometacresol, 6 per cent. parachlorometaxylenol, and 6 per cent. 2, 3-dichloronaphthaquinone-1, 4. Sodium ethylmercurithiosalicylate gave outstandingly good results, killing both pathogens in dubbing at much lower concentrations than any of the other compounds tested. Next in order of efficacy came parachlorometacresol, 2, 4, 5-trichlorophenol, and 2, 3, 4, 6-tetrachlorophenol, all of which, like sodium ethylmercurithiosalicylate, were unaffected by 31 hours' leaching and two months' storage.

1027. GRUNBERG (E.). **The fungistatic and fungicidal effects of the fatty acids on species of Trichophyton.**—*Yale J. Biol. Med.*, xix, 5, pp. 855–876, 9 graphs, 1947.

Methods eliminating as many variables as possible are proposed as a standard for *in vitro* fungistatic and fungicidal testing of the fatty acids. The fungistatic and fungicidal actions of the fatty acids in the series from formic to undecylenic acid increase regularly with the length of the carbon chain according to Traube's rule. The same effects decrease with an increase in the pH of the medium. At pH 7.5 and 8.5 the higher members of the series are more active than the lower ones, possibly because the former produce an emulsion rather than a solution. The evidence at hand suggests that the activity of the fatty acids is attributable to the undissociated molecules rather than to the ions. No appreciable difference in resistance to the fatty acids was observed between *Trichophyton gypseum* and *T. purpureum* or the respective strains of each species used in these experiments. [A preliminary account of this work is given in *J. Bact.*, liii, pp. 372–373, 1947.]

1028. WOLF (F. T.). **The action of sulfonamides on certain fungi pathogenic to man.**—*Mycologia*, xxxviii, 2, pp. 213–219, 1946.

Sulphanilamide was found to be very fungistatic to *Trichophyton mentagrophytes*, *T. rubrum*, *Epidermophyton floccosum*, *Microsporum canis*, *M. gypseum*, and *Sporotrichum schencki* in *in vitro* experiments at the American Air Force School of Aviation Medicine, Randolph Field, Texas. On the other hand, the growth of *Candida albicans*, *C. krusei*, *C. tropicalis*, *C. parakrusei*, *C. pseudotropicalis*, *Cryptococcus neoformans*, *Monosporium apiospermum* [*Allescheria boydii*], *Hormodendrum compactum*, and *Phialophora verrucosa* was not appreciably retarded by the compound.

Sulphathiazole, sulphadiazine, and sulphaguanidine exerted no perceptible fungistatic action on any of the fungi tested.

1029. BALANABANOFF (V. A.). Антибиотично въздействие на някои микроорганизми върху епидермофитони. [Antibiotic properties of certain microorganisms in respect of *Epidermophyton* spp.]—*Annu. Univ. Sofia, Fac. Méd.*, xxvi, pp. 179–183, 3 figs., 1947. [French summary.]

A Gram-negative bacterium of the genus *Alcaligenes* isolated from the skin of a person suffering from favus exerted antibiotic properties in respect of *Epidermophyton* [*Trichophyton*] *interdigitale* and *E. [T.] rubrum*.

1030. HARTLEY (F.). **Parachlorophenol- α -glycerol ether as an antibacterial and antifungal agent of pharmaceutical interest.**—*Quart. J. Pharm.*, xx, 3, pp. 388–395, 1947.

At a concentration of 0.06 per cent. w/v, parachlorophenol- α -glycerol ether inhibited the growth of *Microsporum canis*, *M. audouini*, and *Trichophyton mentagrophytes*, in the presence of 0.1 per cent. *T. rubrum*, *T. [Achorion] schoenleini*, *Epidermophyton floccosum*, and *Sporotrichum schencki* failed to develop, while at 0.25 per cent. *Candida albicans* and *C. vulgaris* also succumbed. The aqueous solutions of the ether leave a lingering, burning taste, rendering it unsuitable for inclusion at adequate concentrations in preparations intended for oral use.

1031. MUSKATBLIT (E.). **Clinical evaluation of undecylenic acid as a fungicide.**—*Arch. Derm. Syph.*, N.Y., lvi, 2, pp. 256–263, 1947.

Two new preparations ('desenex'), an ointment containing 5 per cent. undecylenic acid and 20 per cent. zinc undecylenate, and a powder consisting of 2 per cent. of the same acid and 20 per cent. of its zinc salt, were used in the

treatment of various dermatomycoses at the New York University Skin Clinic from October, 1944, to January, 1946. Of 32 patients with dermatophytosis of varied localization and tinea cruris, 22 (68·7 per cent.) were cured, in five the results were doubtful, and in five the treatment failed. A period ranging from 11 days to 3½ months (average 35 days) was required to effect a cure. Five out of eight patients infected by *Trichophyton interdigitale* and both those harbouring *Epidermophyton inguinale* [*E. floccosum*] were cured, the corresponding figures for *T. purpureum*, onychomycosis (mixed infection by ring-worm fungi and *Monilia* [*Candida*]), moniliasis (*C. albicans*), and pityriasis versicolor [*Malassezia furfur*] being 1 out of 3, 1 out of 4, 0 out of 2, and 4 out of 6, respectively.

1032. FRANKS (A. G.) & FANELLI (D.). **A new treatment for interdigital fungous infection.**—*Urol. cutan. Rev.*, li, 10, pp. 591–592, 1947.

Seventeen patients (average age 34 years, duration of infection 11 months) with uncomplicated interdigital dermatomycosis of the feet, due to *Trichophyton gypseum* in 15 cases and to *Epidermophyton inguinale* [*E. floccosum*] and *Monilia* [*Candida*] in one each, were treated in New York by local medication with a new preparation consisting of 3 per cent. iodo cellulose in glycerine (Kip, Aldrich & Co., Mineola, New York). Beneficial results were secured in all the cases and complete clinical cures in some within a week to a fortnight.

1033. LOEWENTHAL (K.) & TOLMACH (J. A.). **Action of clavacin on some dermatophytes. Final report.**—*J. invest. Derm.*, viii, 6, pp. 357–363, 5 figs., 1947.

Monilia [*Candida*] *albicans*, *Trichophyton gypseum*, *T. purpureum*, and *Microsporum audouini* were used in tests of the antibiotic properties of clavacin at the New York Post-Graduate Medical School, Colombia University. *C. albicans* proved to be the most refractory of the fungi, succumbing only after 24 hours' exposure to a 1 per cent. solution of the crystalline preparation, while *M. audouini* was the most sensitive, being killed in 15 minutes at 1 per cent., in 15 minutes to 3 hours at 0·1, and in 1 to 48 hours at 0·01. *T. gypseum* and *T. purpureum* occupied intermediate positions, the former being destroyed in 15 minutes to 24 hours at 0·1 and in 15 minutes to 3 hours at 1 per cent., the corresponding figures for the latter being 2 hours and 15 minutes, respectively. The fungi exhibited a similar relative susceptibility to the undiluted culture filtrate of *Aspergillus clavatus*.

1034. LOEWENTHAL (K.). **The action of culture filtrates of *Aspergillus clavatus* on dermatophytes. In vitro experiments.**—*J. invest. Derm.*, ix, 1, pp. 41–47, 3 figs., 1947.

Culture filtrates of *Aspergillus clavatus* exerted fungistatic or fungicidal effects on a number of dermatophytes, including *Trichophyton gypseum*, *T. purpureum*, *T. violaceum*, *T. [Achorion] schoenleini*, *Microsporum audouini*, *M. lanosum*, and *Epidermophyton floccosum*, in *in vitro* experiments. Of these organisms the first-named was the most refractory and the last the most susceptible to the filtrates, other factors determining the efficacy of which were potency, duration of contact with the test fungi, and hydrogen-ion concentration. *Monilia* [*Candida*] *albicans* and *Sporotrichum schencki* were not appreciably influenced by the filtrates.

1035. BYRNE (E. A. J.). **Effect of organic mercurial preparations on diseases of the skin.**—*Brit. med. J.*, 1947, 4489, pp. 90–92, 1947.

A report is presented on the successful treatment of 500 cases of dermatomycosis among soldiers of India Command with phenyl mercuric chloride, acetate, and benzoate [*Med. Mycol.*, No. 621].

1036. HOLMAN (J. C.). **Use of trichophytin in thromboangiitis obliterans.**—*Arch. Derm. Syph., N.Y.*, lv, 4, pp. 512–513, 1947.

The treatment with trichophytin of two male patients, one 36 and the other 46 years old, suffering from thromboangiitis obliterans in the author's practice at San Diego, California, resulted in a rapid and decided cure in both cases. It is suggested that in some individuals affected by the disease at least part of the inflammatory mechanism is initiated by an allergic reaction to fungal products, and that trichophytin be given an extended trial as a therapeutic agent.

1037. BRYAN (C. S.) & YOUNG (F. W.). **Phemerol as treatment for ringworm in Calves.**—*Mich. St. Coll. Veterinarian*, v, 3, pp. 118–120, 1945.

Data are given showing that the applications of solution of phemerol (para tertiary-octyl-phenoxy-ethoxy-ethyl-dimethyl-benzyl-ammonium chloride monohydrate, supplied by Parke Davis & Co., at a strength of 1 in 1,000 twice a week to ringworm ([attributed to] *Trichophyton tonsurans*) lesions in 22 calves resulted in the disappearance of the lesions within a month.

1038. KIRK (H.). **Organo-mercury compounds in veterinary medicine.**—*Vet. Rec.*, lviii, pp. 299–300, 1946. [*V.B.*, xvii, 204.]

A severe case of ringworm in a Scottish terrier was treated with a 0.25 per cent. phenyl mercuric ointment, washed off three hours later, re-applied next day, and then left. Except for a slight local vesicant action, the ointment exerted no unfavourable skin effect, and the condition rapidly healed. It appears that a specific remedy against ringworm in animals is now available.

1039. GUIMARAES (L. M.) & LACERDA (P. M. G.). **Micose em bouinos de São Paulo por *Trichophyton faviforme album* (Sabouraud 1909).** [Mycosis in cattle in São Paulo caused by *Trichophyton faviforme album* (Sabouraud 1909).]—*Rev. Fac. Med. vet. S. Paulo*, iii, pp. 151–154, 1945. [*V.B.*, xvii, 465.]

Nine bullocks kept in proximity to other bovines and equines developed an outbreak of ringworm which attacked the head and neck chiefly and remained confined to these nine animals. Infection was transmitted experimentally to man by light scarification, followed by the development of lesions in 21 days. Cultures from cattle and man showed the characters of *Trichophyton faviforme album*.

1040. MURPHY (J. M.) & DRAKE (C. H.). **Infection of the bovine udder with yeast-like fungi.**—*Amer. J. vet. Res.*, viii, 26, pp. 43–51, 2 figs., 2 graphs, 1947.

Ten instances of infection of the udder by a species (probably new) of *Trichosporon* were observed over a period of six years in a herd of some 120 pure-bred Guernsey and Holstein-Friesian cows at the New Jersey Agricultural Experiment Station. The infections were found to be present for 6 to 48 days; the maximum number of fungi per c.c. was 137,000; six of the cases were attended by swelling of the mammary gland lasting for 2 to 7 days; and all but one were accompanied by macroscopic abnormality of the secretion of 3 to 12 days' duration. In one case the pathogen was inoculated into one quarter of a healthy udder, resulting in the development of the typical symptoms of the disease.

1041. AROEIRA NEVES (J.) & COSTA (O. G.). **Tinea nigra.**—*Arch. Derm. Syph., N.Y.*, lv, 1, pp. 67–84, 6 figs., 1947.

In connexion with a case of tinea nigra (the first to be recorded for the State of Minas Gerais, Brazil), involving the left palm of an 18-year-old female, the authors present an account of the history, synonymy, geographical distribu-

tion, clinical symptoms, etiology, mycology, diagnosis, and therapy of the disease, together with a discussion of the classification of the causal organism, *Cladosporium wernecki*, and observations on its cytology. The designation of 'tinea nigra' is preferred, on grounds of clarity and suitability, to the various other names applied to the disease, e.g., keratomycosis nigricans palmaris, pityriasis nigra, cladosporiosis epidermica, and microsporiasis nigra, and it is concluded that the eastern and western forms of the malady are inseparable clinically though due to different species, *C. mansonii* and *C. wernecki*, respectively.

1042. GORDON (D. M.). **Ocular sporotrichosis : report of a case.**—*Arch. Ophthalm.*, N.Y., xxxvii, 1, pp. 56-72, 3 figs. (1 col.), 1947.

Forty-eight cases of ocular sporotrichosis have been reported in the world literature, including the case due to *Sporotrichum schencki* in a 48-year-old female patient at the New York Hospital described in the present paper. Ten of the cases occurred in the United States and most of the remainder in France. Following the bibliographical survey and a report of his case, the author discusses the disease under the aspects of etiological factors, clinical appearance, pathological characteristics, immunity and immune reactions, differential diagnosis, prognosis, and treatment.

1043. COLLINS (W. T.). **Disseminated ulcerating sporotrichosis with widespread visceral involvement : report of a case.**—*Arch. Derm. Syph.*, N.Y., lvi, 4, pp. 523-528, 1 fig., 1947.

A fatal case of disseminated cutaneous and visceral infection by *Sporotrichum schencki* in a 67-year-old male patient at the Cincinnati General Hospital is fully described with a brief survey of the relevant literature.

1044. SMITH (L. M.) & GARRETT (H. D.). **Verrucous sporotrichosis.**—*Arch. Derm. Syph.*, N.Y., lvi, 4, pp. 532-534, 3 figs., 1947.

An unusual case of verrucous sporotrichosis (*Sporotrichum*) [*schencki*], involving the left cheek of a 40-year-old Mexican woman, is reported from El Paso, Texas. The lesions closely resembled those of blastomycosis and did not conform to any of the six clinical types described by Lewis and Hopper (Introduction to Medical Mycology, 1939). A complete cure was effected by the daily administration, over a two-month period, of 15 to 45 drops of a strong iodine solution.

1045. MADDEN (J. F.). **Sporotrichosis in Minnesota.**—*Minn. Med.*, xxx, 8, pp. 854-855, 2 figs., 1947.

The present report of three further cases of sporotrichosis (*Sporotrichum schencki*) from Minnesota brings the total for the State to six. The author's patients (two males aged 41 and 12 and a 41-year-old female) contracted the disease in a localized lymphatic form which responded rapidly to potassium iodide therapy.

1046. SHAFFER (L. W.) & ZACKHEIM (H. S.). **Sporotrichosis : report of a case in which treatment with iontophoresis was successful.**—*Arch. Derm. Syph.*, N.Y., lvi, 2, pp. 244-247, 1 fig., 1947.

A case of sporotrichosis (*Sporotrichum schencki*) of the left arm in a 72-year-old male negro patient at the City of Detroit Receiving Hospital was completely cured in 13 weeks by iontophoretic therapy on five days a week with strong solution of iodine, U.S.P., diluted 1 to 100 in isotonic solution of sodium chloride and increased to 1 to 50 after seven weeks. Intramuscular injections of penicillin (1,200,000 units) proved ineffectual, and in laboratory tests

streptomycin (up to 256 units per c.c.) failed to inhibit the growth of the fungus.

1047. PESSANO (J.) & NEGRONI (P.). **Esporotricosis del párpado inferior. Forma linfangítica localizada con chancro de inoculación.** [Sporotrichosis of the lower eyelid. Localized lymphangitic form with inoculation chancre.]—*Rev. argent. Dermatosis*, xxxi, 1, pp. 108–111, 4 figs., 1947.

Rhinocladium schencki-beurmanni [*Sporotrichum schencki*] was isolated from the lower right eyelid of a male patient at a Buenos Aires hospital. Associated with this localized infection were a preauricular and subangulomaxillary adenopathy and truncal lymphangitis.

1048. PANJA (D.) & DEY (N. C.). **Sporotrichosis of the skin in India (a new species described).**—*Indian med. Gaz.*, lxxxii, 4, pp. 200–202, 2 figs. (1 col.), 1947.

A case of sporotrichosis of the skin, probably only the second to be reported from India, in a native 40-year-old female vegetable-dealer is described. The fungus isolated in pure culture from a nodule on the lateral side of the right wrist resembled *Sporotrichum beurmanni* [*S. schencki*] in the consistency and colour of the colonies and pathogenicity to laboratory animals, but differed from the latter in other respects, e.g., biochemical reactions, morphology, and optimum temperature for growth (22° to 32° C., maximum below 37°). It is designated *Sporotrichum* (*Rhinocladium*) *tropicale* n.sp. [without a Latin diagnosis]. The hyphae of the new species are septate, 2 μ in diameter, and give rise to round (3.2 μ in diameter) and oval (4 by 3 μ) conidia, mounted on sterigmata and disposed along the hyphae or grouped in fours or eights at their apices. Few chlamydospores were produced. Gelatine is not liquefied. Acid (without gas) was evolved from dextrose, laevulose, maltose, galactose, mannose, dextrin, xylose, and mannite (late fermenter).

1049. DARIER (J.), CIVATTE (A.), & TZANCK (A.). **Précis de dermatologie. Cinquième édition par A. Civatte.** [Treatise on dermatology. Fifth edition by A. Civatte.]—Paris, Masson et Cie, 1152 pp., 238 figs., 31 diags., 1947. £4. 4. 0 from Lewis's.

This comprehensive treatise on dermatology falls into two parts dealing, respectively, with the morphology and the nosography of the dermatoses, including those of fungal origin.

1050. CURASSON (G.). **Traité de pathologie exotique vétérinaire et comparée. Deuxième Édition.** [Treatise of veterinary and comparative exotic pathology. Second Edition.]—Vol. I, 365 pp.; II, 360 pp.; III, 323 pp., Paris, Vigot Frères, 1942. [Price from Lewis's £4. 14. 6.]

Volume II, 'Maladies microbiennes', of this work includes a useful account of epizootic lymphangitis of horses (*Cryptococcus farciminosus*) (pp. 205–257). Less extended treatment is given to actinomycosis of cattle and other animals (pp. 139–162), blastomycoses (pp. 198–204), including blastomycosis of the lachrymal passages of horses (*C. mirandei* and *C. lacrymeatus*), sporotrichosis (pp. 258–267), and ringworm, aspergillosis, etc. (pp. 268–274). There are no illustrations.

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